GP2411

COPY

Mitsuhiro Aida
3-8-25 Saikujo-cho
Nara City, Nara 630
Japan
Tel# 81-742-61-7708
Fax# 81-742-64-1653
Email: aida@isl.nara.sharp.co.jp
aimail@mb.infoweb.or.jp
ai-kyoto@mbox.kyoto-inet.or.jp

September 28, 1996

Patent and Trademark Office
United States Dept. of Commerce
Washington, D.C. 20231
U. S. A

Att: Mr. Gail Huyes
Mr. Junghoon Ken Oh

Gentlemen:

U.S. Patent Application# 08/330,573

Regarding the above patent application, I have received your EXAMINER INTERVIEW SUMMARY RECORD and a questionnaire from Mr. J. K. Oh of September 26, 1996 through Kanesaka & Takeuchi, and started to prepare the response. However, it is not possible for me to do it to reach you on or before October 3 because of my pre-scheduled tasks, and I would like to ask you to allow me to dispatch my response on October 6 which will reach you in 3-4 days by Int'l Express P.O. Mail.

The following documents are enclosed with this letter, for your information, with the purpose of showing the matter related to the above patent application, for the case that such kind of questions may arise.

(1) Differences between the conventional method and the invention method

(2) A translation of the priority documents of my patent application in Japan which has the details in explaining the procedures to determine the unique word in the dictionary.

With kind regards,

Yours sincerely,

Mitsuhiro Aida
Applicant

cc Kanesaka & Takeuchi

【Name of document】	Patent application
【Applicant ref. #】	93－102
【Filing date】	August 31, 1993
【Addressee】	Commissioner, Patent Office
【Int. Cl.】	G06F 15／20
【Name of invention】	Text Input Device
【Number of claim】	1
【Inventor】	
【Postal code】	132
【Address】	1－16－8 Hirai, Edogawa－ku, Tokyo
【Name】	Ken Nakamura
【Inventor】	
【Postal code】	270－01
【Address】	1040 Oaza－ka, Nagareyama City, Chiba Prefecture
【Name】	Tsune Aida
【Inventor】	
【Postal code】	270－01
【Address】	1040 Oaza－ka, Nagareyama City, Chiba Prefecture
【Name】	Hidehiko Aida
【Inventor】	
【Postal code】	999－99
【Address】	3－10－27 Kamiosaki, Shinagawa－ku, Tokyo
【Name】	Mikio Ono
【Inventor】	
【Postal code】	111
【Address】	5－71－13 Asakusa, Daito－ku, Tokyo
【Name】	Yoko Ogishima
【Inventor】	
【Postal code】	111
【Address】	227－1 Higurashi, Matsudo City, Chiba Prefecture

【Name】	Masao Aida
【Inventor】	
【Postal code】	630
【Address】	3−8−25, Saikujo−cho, Nara City, Nara Prefecture
【Name】	Mitsuhiro Aida
【Applicant】	
【ID#】	593129700
【Postal code】	132
【Address】	1−16−8 Hirai, Edogawa−ku, Tokyo
【Name】	Ken Nakamura
【Applicant】	
【Postal code】	270−01
【Address】	1040 Oaza−ka, Nagareyama City, Chiba Prefecture
【Name】	Tsune Aida
【Applicant】	
【ID#】	593129711
【Postal code】	270−01
【Address】	1040 Oaza−ka, Nagareyama City, Chiba Prefecture
【Name】	Hidehiko Aida
【Applicant】	
【ID#】	593129722
【Postal code】	999−99
【Address】	3−10−27 Kamiosaki, Shinagawa−ku, Tokyo
【Name】	Mikio Ono
【Applicant】	
【ID#】	593129733
【Postal code】	111
【Address】	5−71−13 Asakusa, Daito−ku, Tokyo
【Name】	Yoko Ogishima
【Applicant】	
【ID#】	593129744

【Postal code】 111
【Address】 227−1 Higurashi,
Matsudo City,
Chiba Prefecture
【Name】 Masao Aida
【Applicant】
【ID#】 593129755
【Postal code】 630
【Address】 3−8−25, Saikujo−cho,
Nara City,
Nara Prefecture
【Name】 Mitsuhiro Aida
【A list of documents attached】
【Name of document】 Specifications
【Name of document】 Drawing
【Name of document】 Abstract
***
【Applicant】
【Postal code】 0471−58−0684
【Name of document】 Specifications
【Name of invention】 Text input device
【Claims】
【Claim#1】

Text input device comprises;
input means to input a character information;
dictionary means to have a plural number of words consisting of a unique line of text, original word and relevant words information;
means for determining said unique word in said dictionary which is unique and which has the same leading part as said data input from said input means;
means for selecting a desired word among said relevant words if said unique word determined by said means for determining said unique word has said relevant words in said dictionary;
output means for outputting said unique

word which was determined by said means for determining said uniqe word, or, outputting said desired word which was selected by said means for selecting said desired word among said relevant words;

control means to control all said means.

【Detailed description of the present invention】

【0001】

【Field of the invention】

The present invention relates to the text input device to lower the burden of text input for the information processing device or communication control device.

【0002】

【Conventional technology】

As one of the text input method, the conventional system utilizes an abbreviation or a shorthand. For example, it has a dictionary with a plural number of words to compare with an input data. If it is equal, the word data corresponding to the input data is supplmented from the dictionary and input burden is lowered.

【0003】

【Background of the invention】

However, in case of above mentioned method, it is necessary to remember an abbreviated word and activate the function to find a desired word by the corresponding key indicating that it is the abbreviation.

【0004】

This invention utilizes a dictionary with a unique line of text and its relevant words information and if the user does in a usual manner of text input, the device looks up the unique word in the dictionary and supplements remaining part.

Accordingly, this function does not rely on the user's capability, does not affect a natural input manner, and provides a highly efficient text input device.

【0005】

【A means to solve a problem】

The text input device comprises;
a means of determining a unique line of text with the same leading part as the data input being inputted via input means in the dictionary, collating the data input with the dictionary words consisting of a unique line of text and its relevant words information;
a means of selecting a desired word on the display, if the unique word has relevant words in the dictionary;
a means of outputting the unique word which was determined by the means of determining the unique word, or which was selected by the means of selecting the desired word among relevant words on the display.

【0006】

【Function】

This text input device, at the time of each character input, adds an input character to the end of a line of text, looks up in a dictionary by comparing the line of text with the characters of words in the dictionary, and tests if there is the unique word which includes the line of text, in the dictionary. If the unique word exists, no more data input is necessary.
If the unique word has relevant words in the dictionary, a desired word can be selected among them on the display and higher input performance can be expected.

【0007】

【Example of embodiment】

Fig. 1 shows a block diagram of one example of this invention, text input device.
In Fig. 1, text input device has a display unit 1 to show an input data and the results of editing, an input unit 2 with a keyboard or a reader to input a character information, a dictionary unit 3 consisting of a Read Only Memory or Random Access Memory, a control unit 4 to control display unit 1, input unit 2, dictionary unit 3 and so forth, and a memory unit 5 using RAM etc to store the control program and input text.

【0008】

Fig. 2 shows a flowchart to explain the function of embodiment.
The function of this device is explained by this flowchart.

【0009】

F001, at the beginning, initializes the contents of program counters, flags, and work area. Next F002 inputs a text, character by character.

【0010】

F003 tests if the input data is an END code. If YES, the step goes to F004 to terminate and halts.
If NO, the step goes to F005.

【0011】

F005 tests if the input data is a character code or not. If it is the code other than the character, the step goes to F009.
In case of the character code, the step goes to F006 to display the input charcter. And, the input data is added to the end of a string of input characters to form a new string of characters at F007.
Then, the step goes to F008 to test the end flag.

【0012】

F008 tests the end flag to know if the words to retrieve still exist in the dictionary.
If ON, it means that there is no more word to search a unique word including a string of input characters in the dictionary, and the step goes back to the input process at F002.
If the end flag is OFF which means that there may still be some words to retrieve in the dictionary, the step goes to F012 that is the subprogram of dictionary search.

【0013】

Jumping here from F005, F009 tests input data at the step of F002, and the step goes back to F002, if it is other than a separator code.

【0014】

If the test result at F009 was the separator code, the step goes to F010 and terminates the input of word that means the process to terminate the word including the addition of input character to the edit area of data input, and goes back to F002 after clearing the contents of the dictionary control information and flags at F011.

【0015】

Jumping here from F008, F012 looks up in the dictionary using a string of input characters. Its search procedure is explained at F035 and followings.
Then, the step goes to F013.

【0016】

F013 tests if an abort flag is ON or OFF, as the result of dictionary search at F012. If ON, the step goes to F014 for the abort procedure (interrup—

tion) and goes back to F002.
If OFF, the step goes to next F015.

【0017】
F015 tests the flag of "Unique word/phrase exists" which indicates if there is the unique word/phrase which includes data input, in the dictionary. If ON, the step goes to F019. If OFF, the step goes to F016.

【0018】
F016 determines if "No corresponding word/phrase" flag is ON or OFF. If ON, the step goes to F017, clears the contents of dictionary control information and flag, turn on the end flag, and goes back to F002.
In case of OFF, the step goes to F018, updates the contents of dictionary control information for the continued retrieval procedure afterwards, and goes back to F002.

【0019】
Branching here from F015, F019 displays the original word/phrase which is the unique word/phrase determined, and goes to F020.

【0020】
F020 tests if there are relevant words. If YES, the step goes to F021 in which relevant words are displayed and goes to F022. If No, the step goes to next F022.

【0021】
F022 accepts an input of selection code to select a desired word among the original word and relevant words on the display.

【0022】
F023 tests if the input data is a SPACE code. If so, the step goes to F024 and determines the original word already

shown on the display, and next F025 erases the words other than the original word and goes back to F002.
If the input data is not the SPACE code, the step goes to F026.

【0023】
F026 tests if the input data is ESC code or not. In case of ESC code, the step goes to F027, erases all relevant information to supplement, and goes back to F002. If it is not ESC code, the step goes to F028.

【0024】
At F028, it is tested if the input is right direction ARROW code or not.
If YES, the step goes to F029 to move cursor position right to advance one word, and goes back F022.
If the cursor was positioned at the right most position of words on the display, no cursor movement takes place.
If it is not right ARROW, the step goes to F030.

【0025】
F030 tests if the input is left direction ARROW code. If it is left ARROW, the step goes to F031, moves cursor position left one word/phrase, and goes back to F022.
If the cursor was at the leftmost position of words/phrases on the display, the cursor position does not move.
If it is not left ARROW, the step goes to F032.

【0026】
F032 tests if it is a TAB code. In case of the TAB code, the step goes to F033 in which cursor moves right one word/phrase, and the step goes back to F022.
If the cursor was already at the rightmost position of the words/phrases on the

display, cursor moves to the left most position of the word/phrase on the display. If it is not the TAB code, the step goes to F034A.

【0027】

F034A tests if it is a ENTER key. In case of the ENTER key, the step goes to F034B, determines the word/phrase at the current cursor position on the display, erases words/phrases other than which was determined to supplement and the step goes back to F002. If it is not the ENTER key, the step goes back to F022 to input again.

【0028】

Branching here from F012, F035 and following steps consist of subprogram of the dictionary search. F035 initializes the state of subprogram including the process to clear the counter. Next F035A turns off the flag to indicate the result of comparison which is used in the process of dictionary search.

【0029】

F036 edits and stores an input character in the input area. Next F037 add 1 to the input counter.

【0030】

At F038, a constant value which is the upper limit for the area to retrieve in the dictionary (or interim value) is stored in work A. For example, in case of 1st character, the upper limit constant is used, and interim value resulted in the prior process is used for 2nd and following characters. Similarly, At F039, a constant which is the lower limit for the area to retrieve in the dictionary (or interim value) is

stored in work B.
Then, the step goes to retrieval process which is explained in the steps starting from F040.

【0031】

F040 adds the contents of work A and work B to work C and divide the contents of work C into 2 which is the process to divide the retrieval area in the dictionary into 2.

【0032】

F041 picks up a word in the dictionary in the location which is addressed by the contents of work C, and stores its word in work DIC. Then, F042 compares input data with the contents of work DIC. If it is equal, the step goes to F046. If not equal, the step goes to F043.

【0033】

F043 compares input data with the contents of work DIC. If the input data is smallller, the step goes to F061. If not smaller, the step goes to F044.

【0034】

F044 compares input data with the contents of work DIC. If the input data is larger, the step goes to F057. If not larger, the step goes to the next F045 in which an abort flag is turned on to indicate that there must be some abnormal state other than EQUAL/LARGER/SMALLER, as the consequence of testing. Then, the step goes to exit of this subprogram.

【0035】

Jumping here from F042, F046 tests if the upper limit of the retrieval area was already fixed by the prior retrieval process. In this case,
"fixed" means that the highest position of of registered words with the same leading

part as the data input was fixed, as the result of retrieval process at the time of 1st character input, for example.
If it was fixed already, the step goes to F048. If not fixed yet, the step goes to F047.

【0036】
F047 is a subroutine to determine the upper limit (highest position) of the retrieval area. Then, the step goes to F048.

【0037】
F048 tests if the lower limit (lowest position) of the retrieval area was fixed already, in the prior retrieval process.
In this case, "fixed" means that the lowest position of the dictionary words with the leading part as the input characters was fixed, as the result of looking up the dictionary, for the 1st character input, for example. If it was already fixed, the step goes to F050.
If not fixed yet, the step goes to F049.

【0038】
F049 is a subrountine to determine the lower limit (lowest position) of the area to retrieve in the dictionary and its procedure is explained at the steps starting from F073.
After then, the step goes to next F050.

【0039】
F050 searches the word in a range of the retrieval area in the dictionary which is indicated by the upper and lower limit positions.
Then, the step goes to next F051.

【0040】
F051 determines if a corresponding word/phrase was detected in the dictionary search at F050. If there was no

corresponding word, the step goes to F052 in which the flag of "No corresponding word/phrase" is turned on and the step goes to exit of this subprogram. If the corresponding word was found, the step goes to F053, the flag of "No corresponding word" is turned off, and then, the step goes to F054.

【0041】
F054 tests if the corresponding word/-phrase is single. If it is single, the step goes to F055, the flag of "Unique word/phrase exists" is turned on, and the step goes to exit of this subprogram.
In case of a plural number of words/-phrases, the step goes to F056, and tests if there is a word/phrase in the dictionarywhich all characters are equal to those of data input, i.e. the testing to know if there is the word/phrase terminated with the last input character and which fully equals data input.
For example, concerning the case of having "ship" and "shipment", there are 2 words with the part of "ship".
If the data input is "ship", it is the case of the word which is terminated with the last input character and which all characters are equal to data input.
If its corresponding word was found, the step goes to F056A, the flag of "Unique word/phrase exists" is turned on, and the step goes to exit of this subprogram.
If its corresponding word was not found, the step goes to F056B, the flag of "Unique word/phrase exists" is turned off, and goes to exit of this subprogram.

【0042】
Branching here from F044, work C has

the value which is one half of addition of the upper and lower limit value, and F057 tests if the contents of work C are equal to the value subtracting 1 from the upper limit value for the area to retrieve in the dictionary.
If it is equal, it means that the retrieval process reached at the upper limit of the area to retrieve in the dictionary and completed its retrieval in the corresponding area.
Then, the step goes to F058 to turn on the flag of "No corresponding word/phrase, goes to F059 to turn on the "End flag", and the step goes to exit of this sub-program. If the above test result was not equal, the step goes to next F060.

【0043】
F060 moves the contents of work C to work B and next F060A adds 1 to the contents of work B to narrow the retrieval area in the dictionary, i.e. the step to narrow the retrieval area to the upper direction, replacing the interim lower limit value for the retrieval area with the contents of work C adding 1, because data input is larger than the word from dictionary. Then, the step goes back to F040.

【0044】
Jumping here from F043, F061 tests if the content of work C containing the value of summing the upper and lower limits values and dividing it into 2, is equal to the value subtracting 1 from the lower limit value (constant or interim value) for the area to retrieve in the dictionary.
If it is equal, it means that the retrieval process reached at the lower

limit of the retrieval area and completed in the corresponding area. Then, the step goes to F062, the flag of "No corresponding word/-phrase" is turned on. Next step F063 turns the end flag off, and goes to exit of this subprogram. If it is not equal (at the testing of F061), the step goes to next F064 and the contents of work C are transferred to work A, and 1 is subtracted from the contents of work A in order to narrow the area to retrieve in the dictionary, i. e. the step to narrow the retrieval area to the lower direction, replacing the interim upper limit value with the contents of work C subtracting 1, because data input is smaller than the dictionary word. Then, the step goes back to F040.

【0045】
Jumping here from F047, F065 moves upper limit constant or interim value for the retrieval area in the dictionary to work U, as the initial step in the sub-routine of the upper limit determination to fix the upper limit for the retrieval area in the dictionary.

【0046】
F066 tests if the contents of work c are equal to the upper limit value (contents of work U) for the retrieval area in the dictionary. If it is equal, it is the case that the retrieval process was repeated using the method to divide the area into 2 and reached at the position of the upper limit value (contents of work C) without determination of the upper limit, as the result of having a plenty of the

same word characters existing in the area. Then, the step goes to F067 in which the contents of work UPPER are set to work UPPER DETERMINED to fix the upper limit, next F068 turns the flag of "Upper limit determined" on, and exits this subprogram. If not equal at the testing of F066, the step goes to F069.

【0047】

F069 divides the value of summing the contents of work C and work U into 2, and sets its result to work UPPER. Next F070 picks up the dictionary word in the location which is indicated by the contents of work UPPER.

【0048】

F071 tests if the word from dictionary is larger than the data input. If it is larger, the step goes to F071A and the contents of work UPPER are transferred to work U to set the upper limit value with the purpose to retrieve the area in the dictionary which is located lower than the word accessed from dictionary. Then, the step goes back to F066. If not larger at the testing of F071, the step goes to F072 and adds 1 to the contents of work C to narrow the retrieval area, for the purpose to retrieve the dictionary area which is located upper than the word accessed from dictionary.

【0049】

Jumping here from F049, F073 moves upper limit constant or interim value for the retrieval area in the dictionary to work L, as the initial step of subroutine to search and determine the lower limit.

【0050】

F074 tests if the contents of work C are equal to the upper limit value. If it is equal, it is the result of the repeated retrieval process, dividing the retrieval area into 2, and reaching at the upper limit value (contents of work L) without determination of the lower limit, because of a plenty of the same word characters existing in the area.
Then, the step goes to F075 and moves the contents of work LOWER to work LOWER DETERMINED to fix the lower limit. Then, the flag f "Lower limit determined" is turned on at F076, and the step goes to the exit of this subprogram.
If it is not equal at F074, the step goes to F077.

【0051】
F077 adds the contents of work C and work L to work LOWER and divide the contents of work LOWER into 2, to narrow the retrieval area.
Next F078 picks up the word which is in the location indicated by the contents of work LOWER. Then, the step goes to F079.

【0052】
F079 tests if the dictionary word is smaller than data input. If it is smaller, the step goes to F079A to set the upper limit value moving the contents of work LOWER to work L, for the intention to continue to retrieve in the area upper than the location of the word accessed from dictionary.
Then, the step goes back to F074.
If it is not smaller at the testing of F079, next step F080 substracts 1 from the contents of work C, for the continued

retrieval of the area lower than the location of the word from dictionary. Then, step goes back to F074.

【0053】

Fig. 3 shows the contents of dictionary which is utilized in this text input device shown in this example and examples of the retrieval process and its display.

【0054】

Referring to Fig. 1 − 1. An example of the dictionary contents, 「Index Word/Phrase」 in the example of the dictionary contents means a string of characters for the determination of a unique word/phrase and is collated with data input at the time of each character input.

「Contents of registered Word/Phrase」 shows the number of the original word/phrase characters (n: number of Index Word/Phrase characters i.e. the number of characters for determination of the unique word/phrase) = part of speech etc (code) / ... / part of speech etc (code), and relevant word/phrase = part of speech etc (code) / ... / part of speech (code).

For example, let us assume that "est" was typed in. At this point, there are plural words (esta, esti) with the same leading part as "est".

After data input of "esti", it becomes the unique index word/phrase in the dictionary, and the contents on the display are replaced with "estimate" that is the original word/phrase characters, and also relevant words such as "estimable", "estimation" are displayed for the selection on the display.

【0055】

Referring to Fig. 3 − 2. An example of the retrieval process (ex. 1), the unique word/−

phrase characters "estimate" is displayed at the time of input upto "esti", and relevant words/phrase chracters "estimable", "estimation" are also displayed. "estimate" is highlighted.
Next SPACE bar determines "estimate" at the current cursor position, and other relevant words/phrase characters are erased on the display.

【0056】
Referring to Fig. 3 − 2. An example of the retrieval process (ex. 2), the depression of right ARROW key at the point of aforementioned 0055 moves cursor right one word/phrase, and "estimable" is highlighted.

【0057】
Referring to Fig. 3 − 2. An example of the retrieval process (ex. 3), the depression of left ARROW key at the point of aforementioned 0055 moves cursor left one word/phrase, and "estimate" is highlighted.

【0058】
Referring to Fig. 3 − 2. An example of the retrieval process (ex. 4), the depression of TAB key at the point of aforementioned 0055 moves cursor right one word/phrase, and "estimable" is highlited. In case of the TAB key, the cursor moves to leftmost position if the cursor was already positioned at the rightmost position.

【0059】
Referring to Fig. 3 − 2. An example of the retrieval process (ex. 5), if "eve" is typed in, the unique word "event" is supplemented and displayed, as well as the relevant words "eventually" and "eventuate" on the display.

The depression of ENTER key determines "event." If "event" was mistakenly taken, ESC key can cancel and erase all words/-phrase characters on the display and accepts data input from the point immediately before the supplementing/-selecting.

【0060】

【Effect of this invention】

In the Text Input Device of this invention, means for determining a unique word/phrase determines the unique word/phrase which includes data input in the dictionary. If the unique word/phrase was detected, data input on the display is replaced with the word/phrase from the dictionary as well as the relevant words, and no more input is necessary. Accordingly, it is possible to increase an efficiency of the text input without much relying on the personal capability.

【0061】

【Description of drawings】

【Fig. 1】

A block chart of the processing unit for the device as an example of the embodiment of this invention, Text Input Device.

【Fig. 2】

A flowchart of the contents of the process in the Text Input Device, as an example of this invention.

【Fig. 3】

Examples of the retrieval process and the contents of dictionary.

【Description Of Signs】

1 Display Unit
2 Input Unit
3 Dictionary Unit
4 Control Unit

21/22

5 Memory Unit

【Name of document】 Abstract

【Description】

【Purpose】

It raises an efficiency of the text input without much relying on the personal capability.

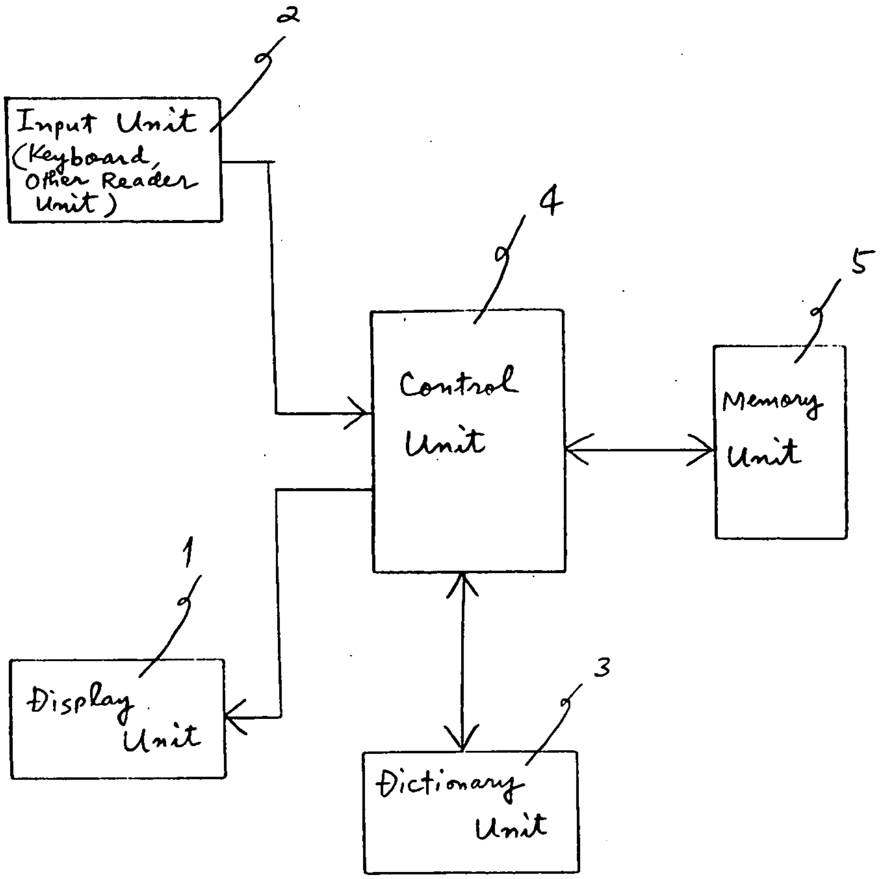
【Configuration】

In the text input device, data input is made, character by character (F002), to form a line of input text (F007), the control unit looks up in a dictionary using the line of input text (F012), and replaces it with the word/phrase from dictionary if the unique word/phrase was found (F019). If there are relevant words, those are displayed for the selection (F021), and the input text on the display is replaced with one of relevant words if selected (F034B, F034C).

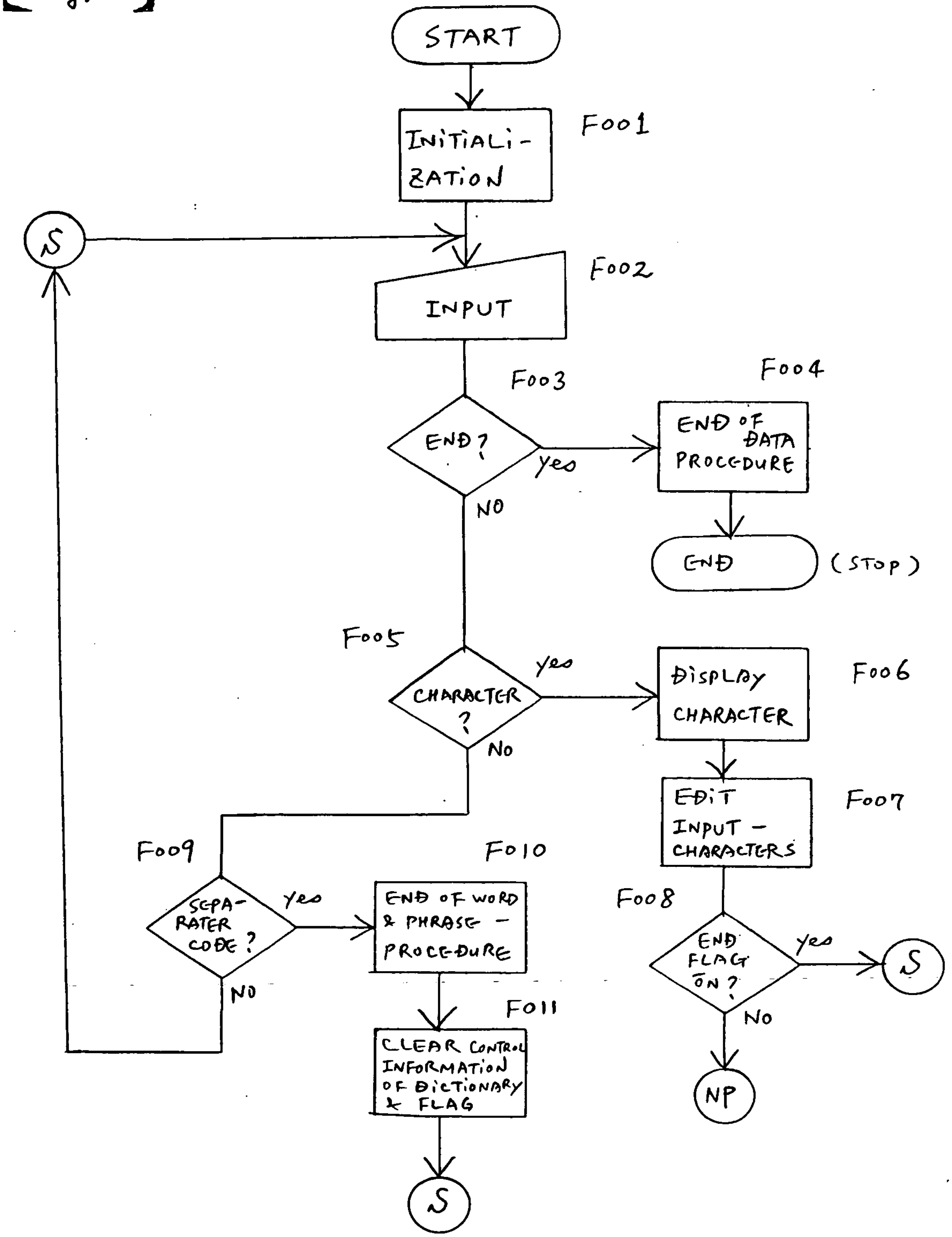
【Selected Fig.】 Fig. 2

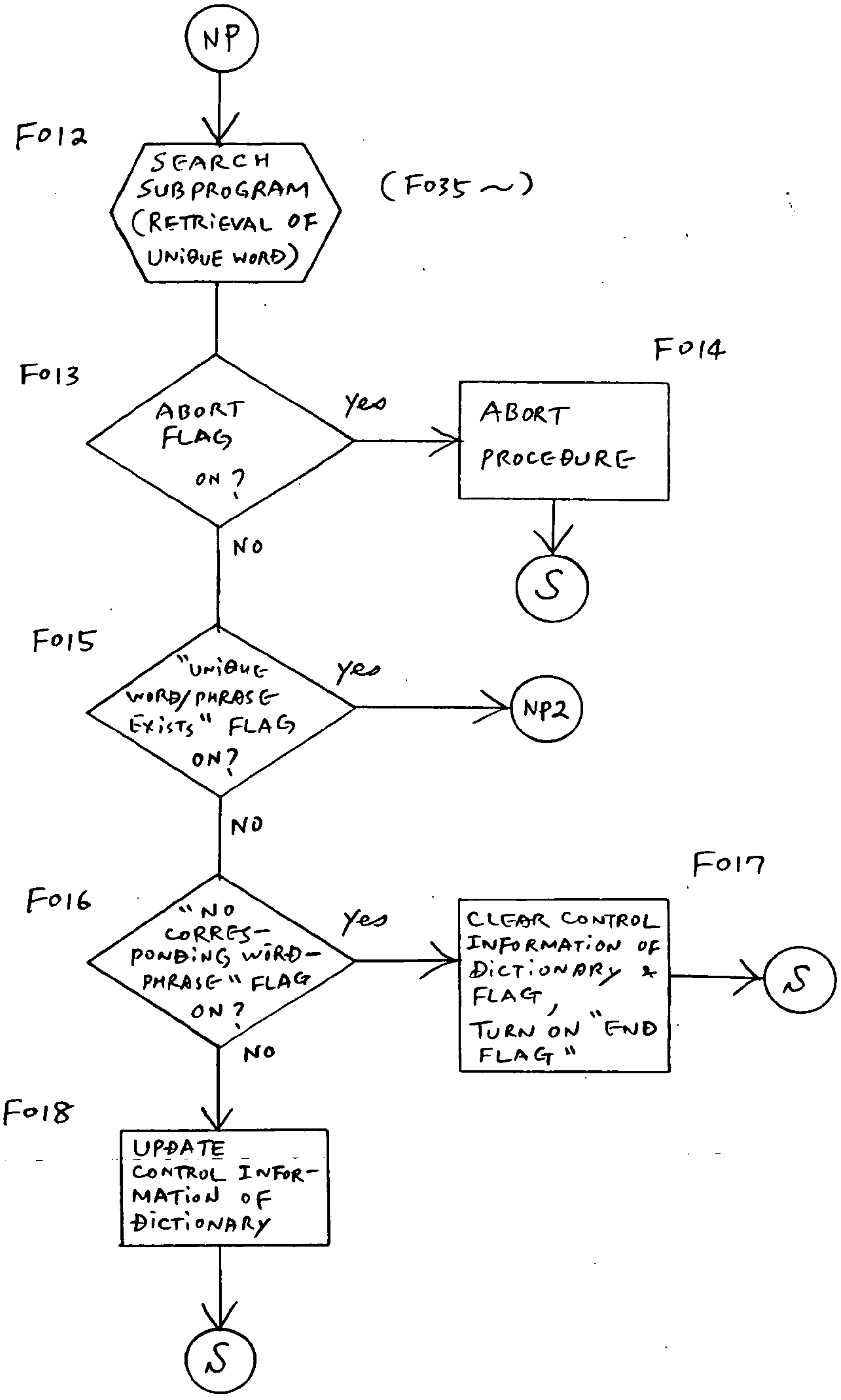
[Name of document] DRAWING

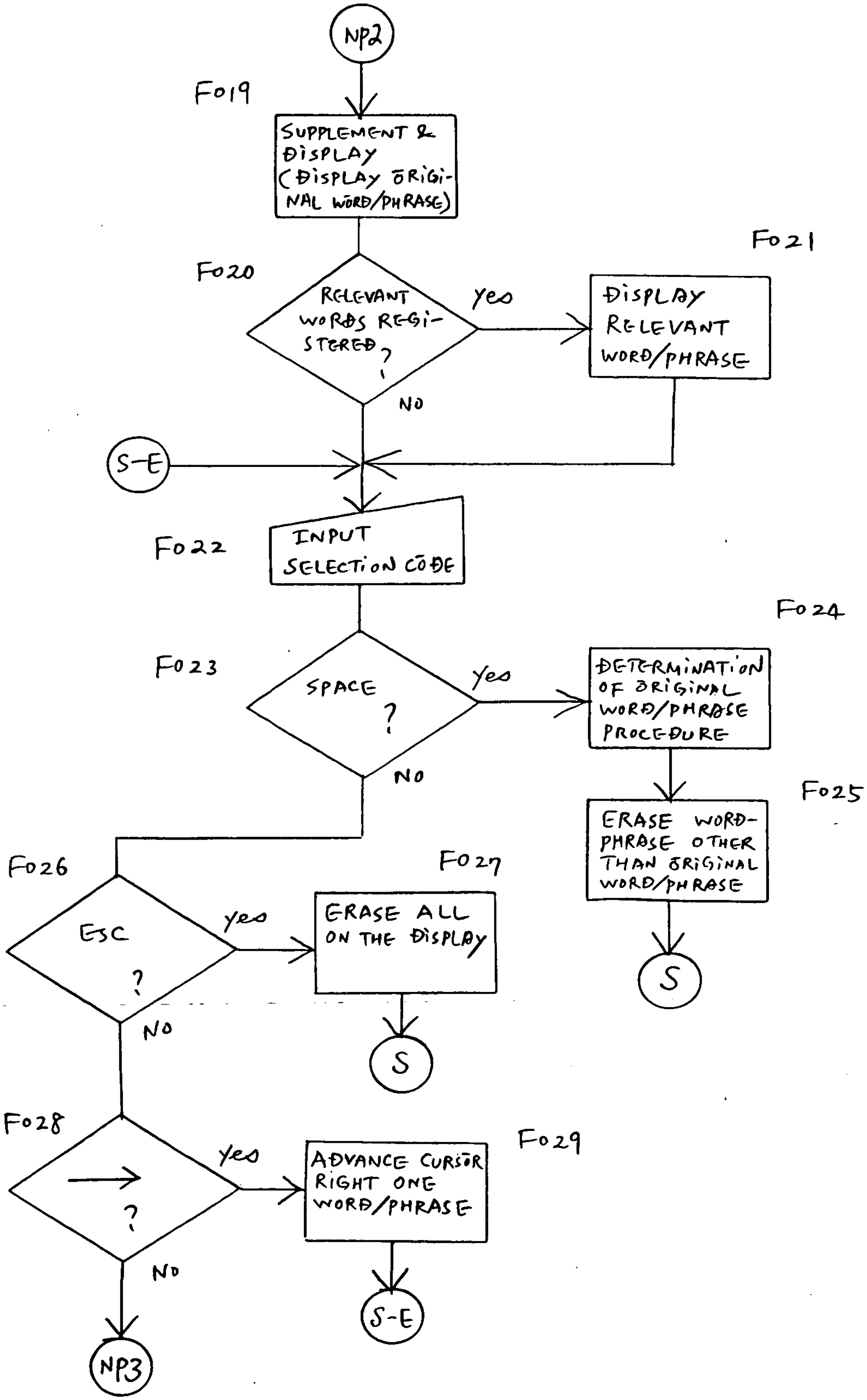
[Fig. 1]

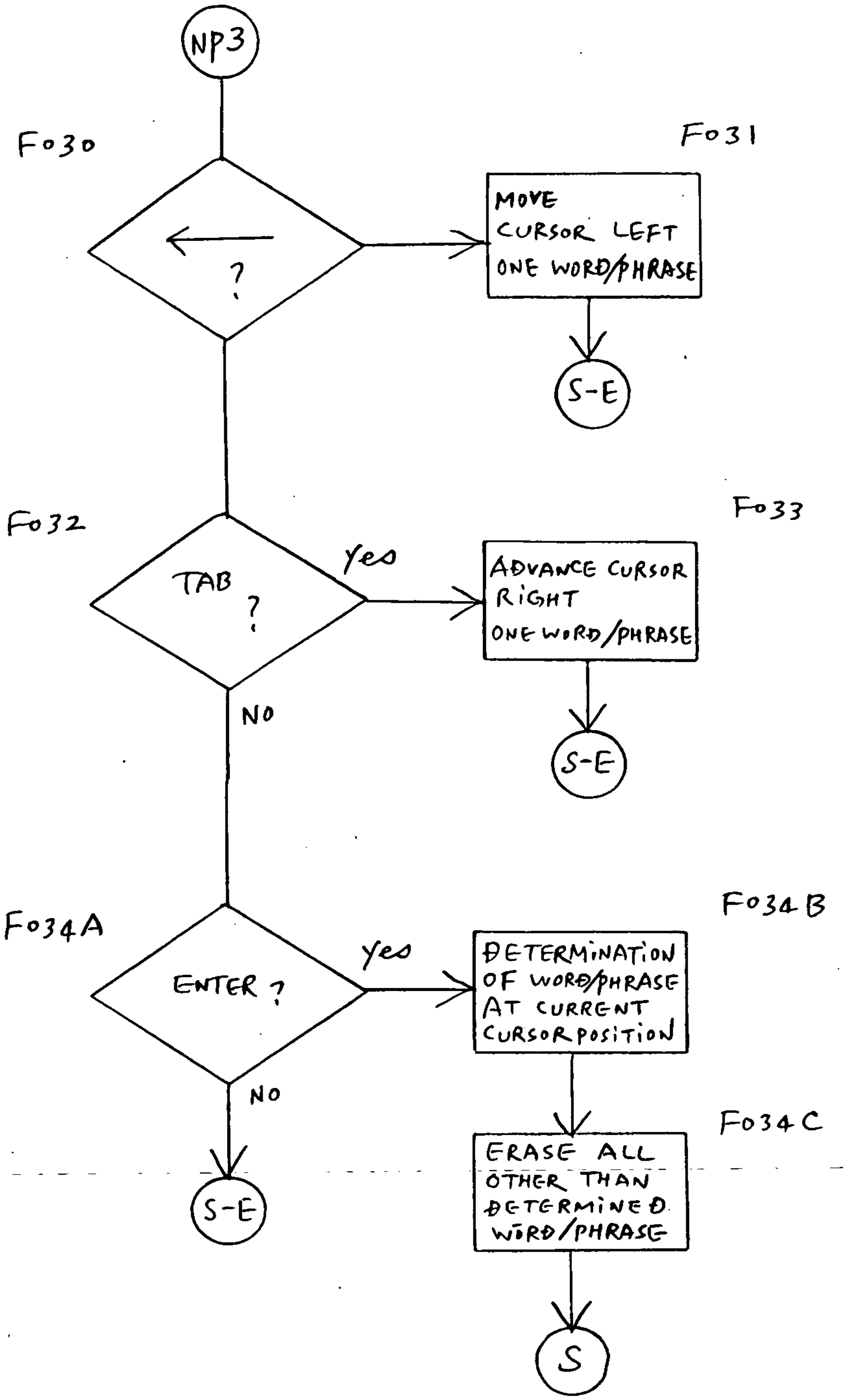


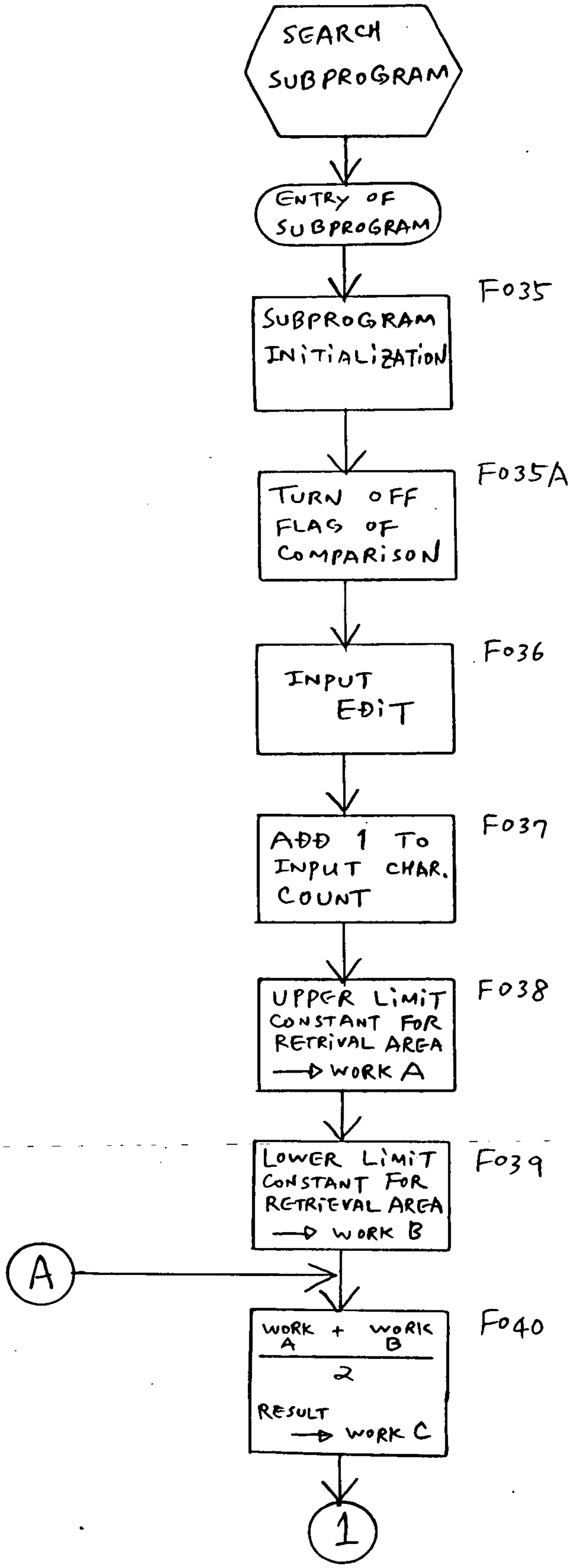
[Fig. 2]

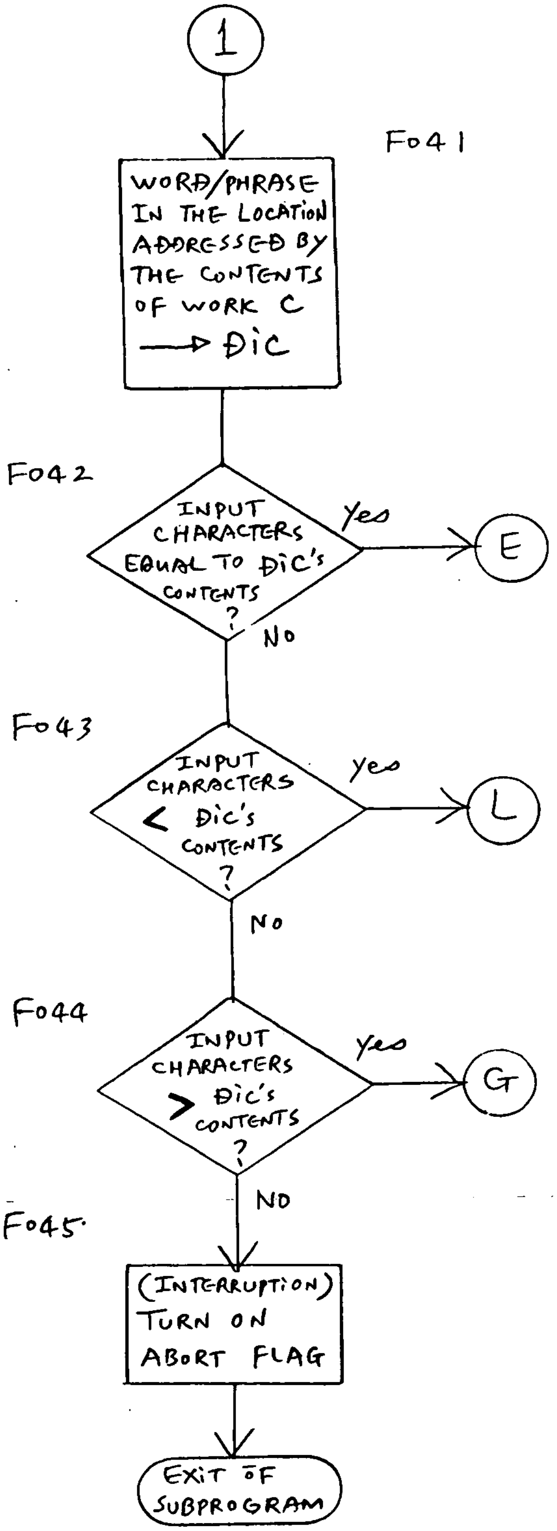

START
INITIALIZATION
F001
S
INPUT
F002
F003
F004
END?
yes
END OF DATA PROCEDURE
NO
END
(STOP)
F005
CHARACTER ?
yes
DISPLAY CHARACTER
F006
No
EDIT INPUT-CHARACTERS
F007
F009
F010
F008
SEPARATER CODE ?
yes
END OF WORD & PHRASE-PROCEDURE
END FLAG ON ?
yes
S
NO
F011
CLEAR CONTROL INFORMATION OF DICTIONARY & FLAG
No
NP
S

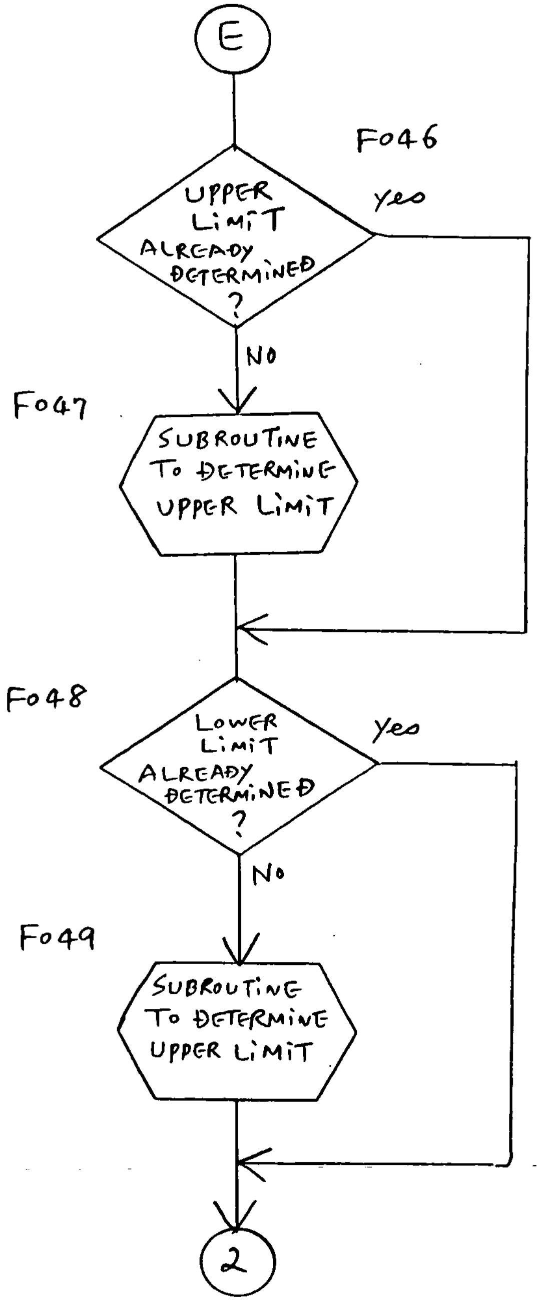

NP
F012
SEARCH SUBPROGRAM (RETRIEVAL OF UNIQUE WORD)
(F035 ~)
F013
ABORT FLAG ON ?
yes
F014
ABORT PROCEDURE
S
NO
F015
"UNIQUE WORD/PHRASE EXISTS" FLAG ON ?
yes
NP2
NO
F016
"NO CORRES-PONDING WORD-PHRASE" FLAG ON ?
yes
F017
CLEAR CONTROL INFORMATION OF DICTIONARY & FLAG, TURN ON "END FLAG"
S
NO
F018
UPDATE CONTROL INFOR-MATION OF DICTIONARY
S

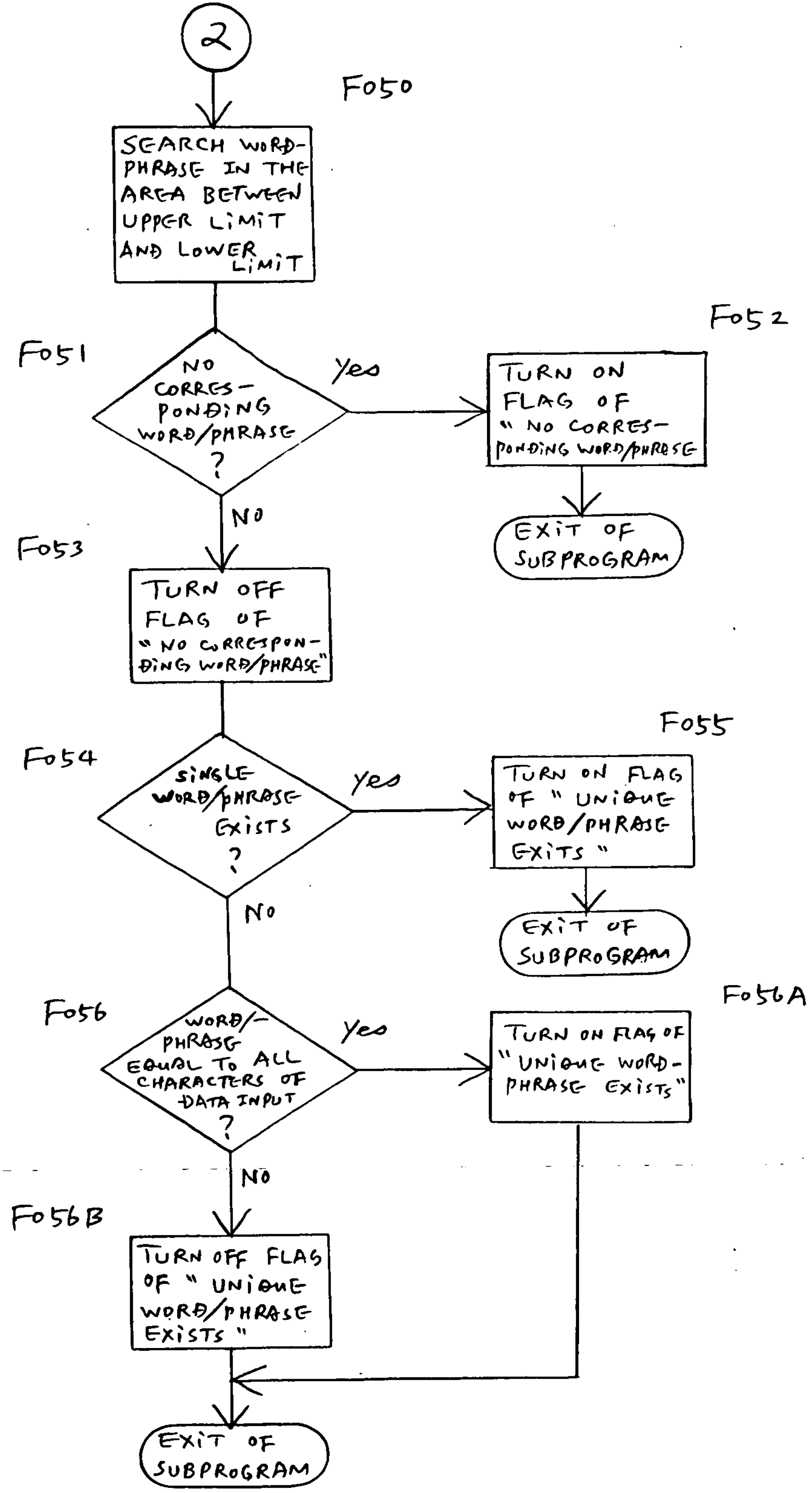

NP2
F019
SUPPLEMENT & DISPLAY (DISPLAY ORIGINAL WORD/PHRASE)
F020
RELEVANT WORDS REGISTERED?
yes
NO
F021
DISPLAY RELEVANT WORD/PHRASE
S-E
F022
INPUT SELECTION CODE
F023
SPACE ?
yes
NO
F024
DETERMINATION OF ORIGINAL WORD/PHRASE PROCEDURE
F025
ERASE WORD-PHRASE OTHER THAN ORIGINAL WORD/PHRASE
S
F026
ESC ?
yes
NO
F027
ERASE ALL ON THE DISPLAY
S
F028
→ ?
yes
NO
F029
ADVANCE CURSOR RIGHT ONE WORD/PHRASE
S-E
NP3

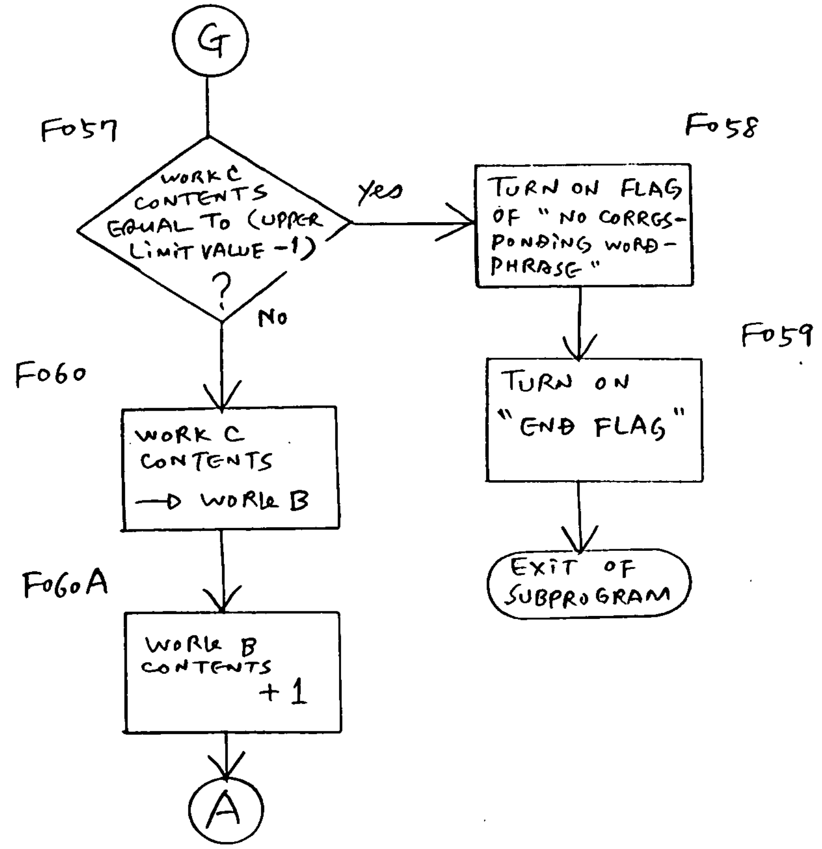

NP3
F030
←
?
F031
MOVE CURSOR LEFT ONE WORD/PHRASE
S-E
F032
TAB ?
yes
F033
ADVANCE CURSOR RIGHT ONE WORD/PHRASE
NO
S-E
F034A
ENTER ?
yes
F034B
DETERMINATION OF WORD/PHRASE AT CURRENT CURSOR POSITION
NO
S-E
F034C
ERASE ALL OTHER THAN DETERMINED WORD/PHRASE
S


SEARCH SUBPROGRAM
ENTRY OF SUBPROGRAM
F035
SUBPROGRAM INITIALIZATION
F035A
TURN OFF FLAG OF COMPARISON
F036
INPUT EDIT
F037
ADD 1 TO INPUT CHAR. COUNT
F038
UPPER LIMIT CONSTANT FOR RETRIVAL AREA → WORK A
F039
LOWER LIMIT CONSTANT FOR RETRIEVAL AREA → WORK B
A
F040
WORK A + WORK B / 2
RESULT → WORK C
1

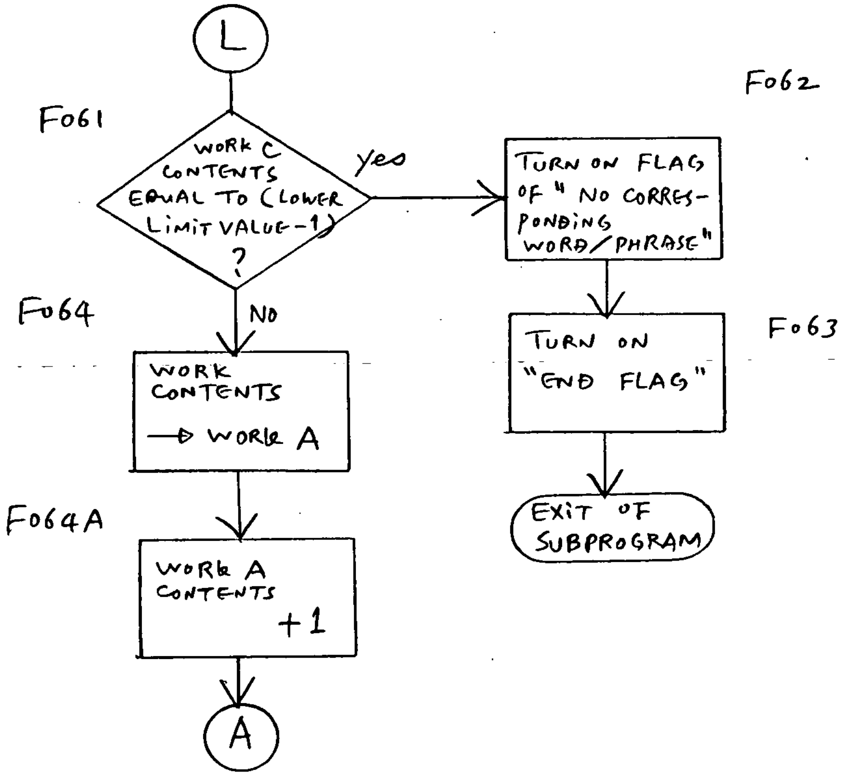

1
F041
WORD/PHRASE IN THE LOCATION ADDRESSED BY THE CONTENTS OF WORK C ——▷ DIC
F042
INPUT CHARACTERS EQUAL TO DIC'S CONTENTS ?
yes
E
NO
F043
INPUT CHARACTERS < DIC'S CONTENTS ?
yes
L
NO
F044
INPUT CHARACTERS > DIC'S CONTENTS ?
yes
G
NO
F045
(INTERRUPTION) TURN ON ABORT FLAG
EXIT OF SUBPROGRAM


E
F046
UPPER LIMIT ALREADY DETERMINED ?
yes
NO
F047
SUBROUTINE TO DETERMINE UPPER LIMIT
F048
LOWER LIMIT ALREADY DETERMINED ?
yes
NO
F049
SUBROUTINE TO DETERMINE UPPER LIMIT
2

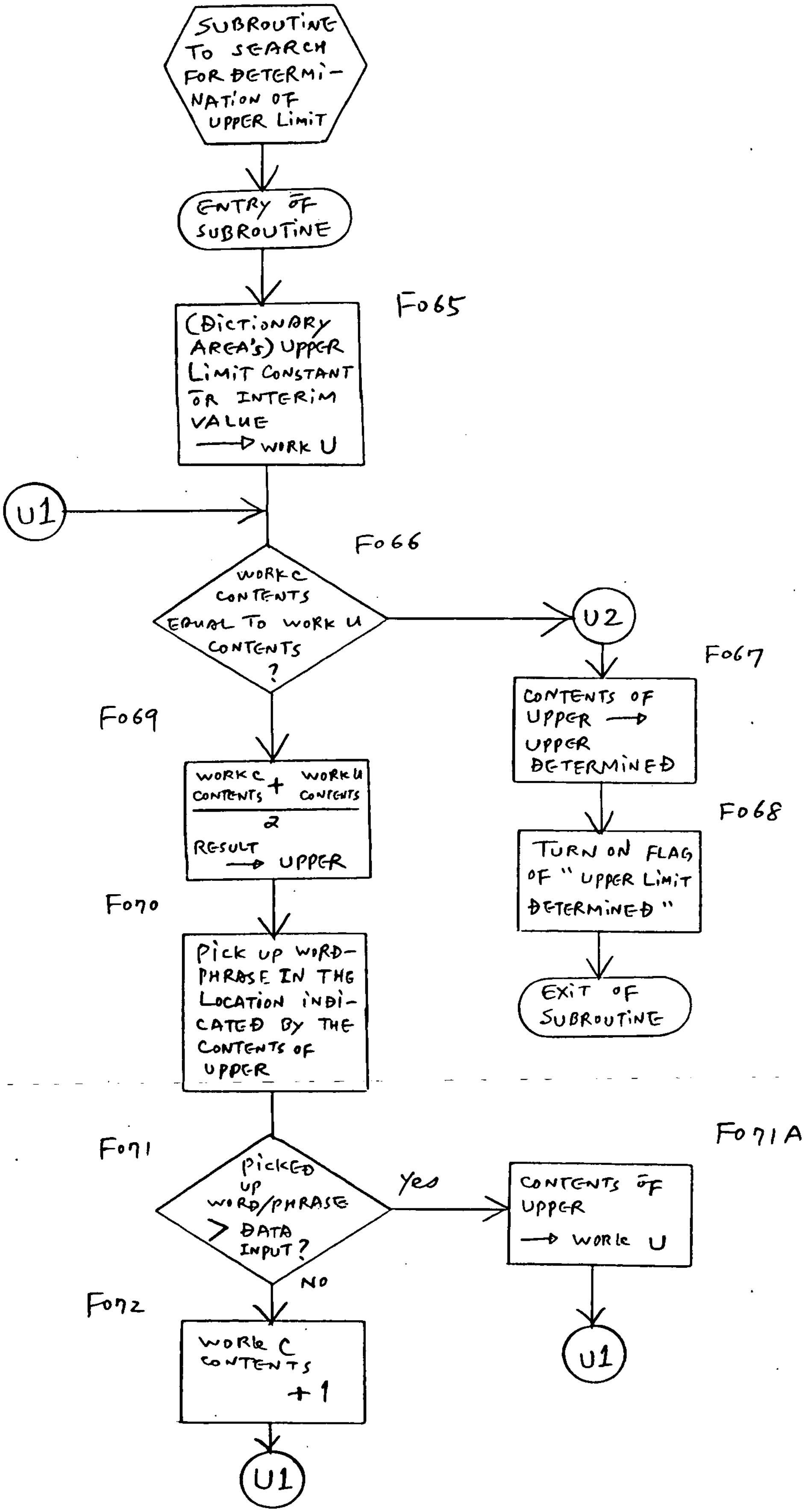

2
F050
SEARCH WORD-PHRASE IN THE AREA BETWEEN UPPER LIMIT AND LOWER LIMIT
F051
NO CORRES-PONDING WORD/PHRASE ?
yes
F052
TURN ON FLAG OF " NO CORRES-PONDING WORD/PHRASE
EXIT OF SUBPROGRAM
NO
F053
TURN OFF FLAG OF " NO CORRESPON-DING WORD/PHRASE"
F054
SINGLE WORD/PHRASE EXISTS ?
yes
F055
TURN ON FLAG OF " UNIQUE WORD/PHRASE EXITS "
EXIT OF SUBPROGRAM
NO
F056
WORD/PHRASE EQUAL TO ALL CHARACTERS OF DATA INPUT ?
yes
F056A
TURN ON FLAG OF "UNIQUE WORD-PHRASE EXISTS"
NO
F056B
TURN OFF FLAG OF " UNIQUE WORD/PHRASE EXISTS "
EXIT OF SUBPROGRAM

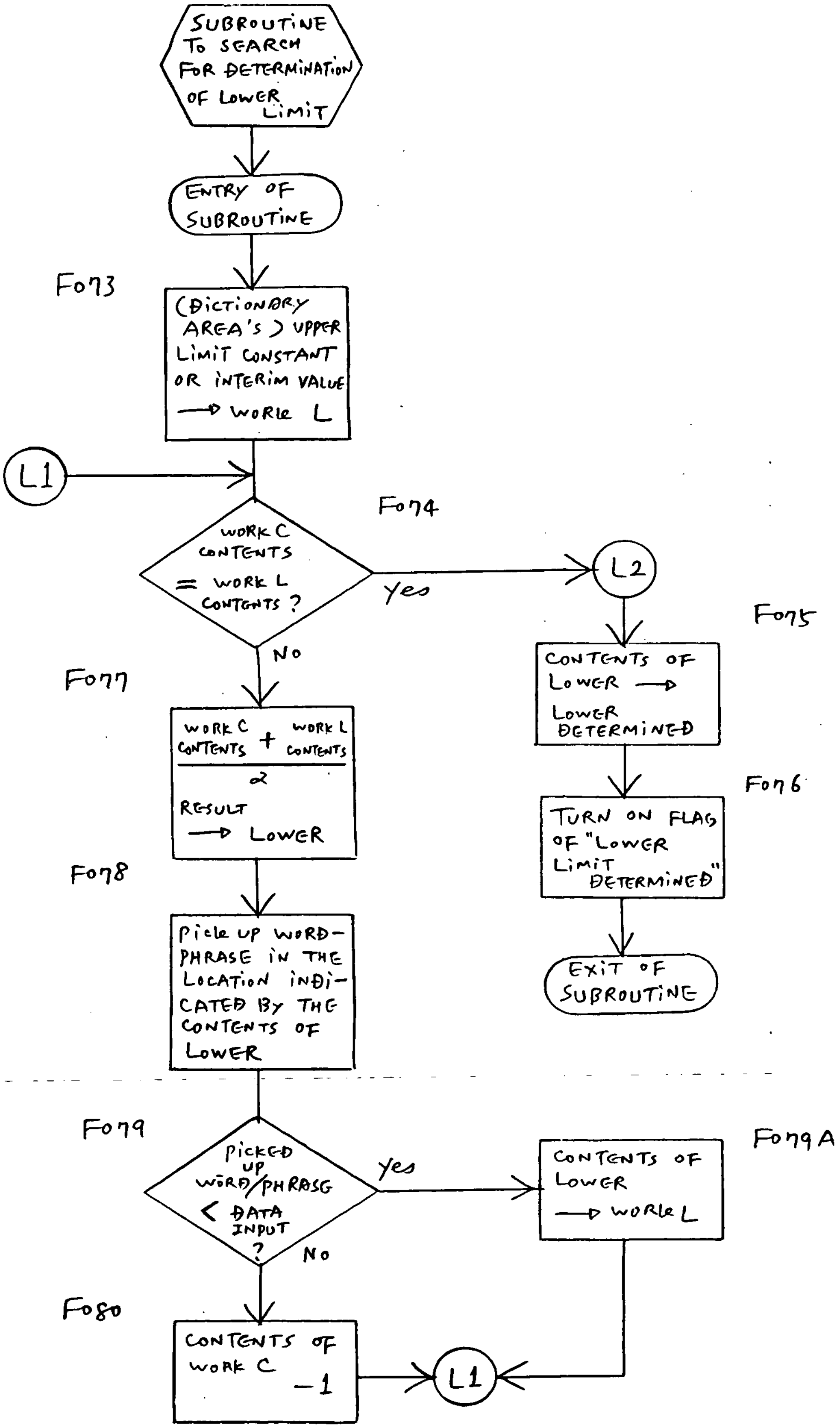


G
F057
WORK C CONTENTS EQUAL TO (UPPER LIMIT VALUE -1) ?
yes
No
F058
TURN ON FLAG OF "NO CORRES-PONDING WORD-PHRASE"
F059
TURN ON "END FLAG"
EXIT OF SUBPROGRAM
F060
WORK C CONTENTS → WORK B
F060A
WORK B CONTENTS +1
A



L
F061
WORK C CONTENTS EQUAL TO (LOWER LIMIT VALUE-1) ?
yes
NO
F062
TURN ON FLAG OF "NO CORRES-PONDING WORD/PHRASE"
F063
TURN ON "END FLAG"
EXIT OF SUBPROGRAM
F064
WORK CONTENTS → WORK A
F064A
WORK A CONTENTS +1
A


SUBROUTINE TO SEARCH FOR DETERMINATION OF UPPER LIMIT
ENTRY OF SUBROUTINE
F065
(DICTIONARY AREA'S) UPPER LIMIT CONSTANT OR INTERIM VALUE ⟶ WORK U
U1
F066
WORK C CONTENTS EQUAL TO WORK U CONTENTS ?
U2
F067
CONTENTS OF UPPER ⟶ UPPER DETERMINED
F068
TURN ON FLAG OF "UPPER LIMIT DETERMINED"
EXIT OF SUBROUTINE
F069
WORK C CONTENTS + WORK U CONTENTS / 2 RESULT ⟶ UPPER
F070
PICK UP WORD-PHRASE IN THE LOCATION INDICATED BY THE CONTENTS OF UPPER
F071
PICKED UP WORD/PHRASE > DATA INPUT ?
Yes
NO
F071A
CONTENTS OF UPPER ⟶ WORK U
U1
F072
WORK C CONTENTS +1
U1


SUBROUTINE TO SEARCH FOR DETERMINATION OF LOWER LIMIT
ENTRY OF SUBROUTINE
F073
(DICTIONARY AREA'S) UPPER LIMIT CONSTANT OR INTERIM VALUE → WORK L
L1
F074
WORK C CONTENTS = WORK L CONTENTS ?
Yes
L2
F075
CONTENTS OF LOWER → LOWER DETERMINED
F076
TURN ON FLAG OF "LOWER LIMIT DETERMINED"
EXIT OF SUBROUTINE
No
F077
WORK C CONTENTS + WORK L CONTENTS / 2
RESULT → LOWER
F078
PICK UP WORD-PHRASE IN THE LOCATION INDICATED BY THE CONTENTS OF LOWER
F079
PICKED UP WORD/PHRASE < DATA INPUT ?
Yes
No
F079A
CONTENTS OF LOWER → WORK L
F080
CONTENTS OF WORK C −1
L1

[Fig.3]

EXAMPLES OF THE RETRIEVAL PROCESS AND CONTENTS OF DICTIONARY

1. AN EXAMPLE OF THE DICTIONARY CONTENTS

[INDEX WORD/PHRASE] A STRING OF CHARACTERS FOR DETERMINATION OF UNIQUE WORD/PHRASE	[CONTENTS OF REGISTERED WORD/PHRASE] {ORIGINAL WORD/PHRASE (n) = PART OF SPEECH (CODE)/---/PART OF SPEECH (CODE), RELEVANT WORD/PHRASE = PART OF SPEECH (CODE)/---/PART OF SPEECH (CODE)} (n : THE NUMBER OF CHARACTERS FOR DETERMINATION OF INDEX WORD/PHRASE i.E. UNIQUE WORD/PHRASE)
≀	
esta	**{establish(4)=vt, establishment=n}**
esti	**{estimate(4)=vi/vt/n. estimable=a. estimation=n}**

euro	**{Europe(4)=n. European=a/n. Europeanize=vt.
	Europeanization=n. European Common Market=ph.
	European Community=ph.
	European Economic Community=ph}**

eve	**{event(3)=n. eventually=ad. eventuate=vi}**
eventf	**{eventfully(6)=ad}**
exe	**{execute(3)=vt. execution=n. executive=a/n}**
exem	**{exempt(4)=vt/a/n. exemplification=n}**
exempl	**{exemplify(6)=vt. exemplified=a. exemplification=n}**
≀	

REMARKS) PART OF SPEECH etc (CODE)
prep (preposition), pron (pronoun), n (noun), vi & vt (verb),
conj (Conjunction), a (adjective), ad (adverb), ph (phrase)

2. AN EXAMPLE OF THE RETRIEVAL PROCESS

(EX. 1)

... they will esti ---- Data input

... they will estimate estimable estimation ----- REPLACEMENT

<SUPPLEMENTED⊛> (HIGHLIGHTED) ------ "estimate" is highlighed.

Next SPACE bar
determines "estimate" and displays following.

... they will estimate ←-------------------

(EX. 2)

<AFTER SUPPLEMENT⊛> Right ARROW key advances cursor position right one word/-phrase.

... they will estimate estimable estimation

(HIGHLIGHTED) ----- "estimable" is highlighted, in this case.

(EX. 3)

<AFTER SUPPLEMENT⊛> Left ARROW key backspaces cursor position left one word/-phrase.

... they will estimate estimable estimation

(HIGHLIGHTED) ----- "estimate" is highlighted, in this case.

(EX. 4)

<AFTER SUPPLEMENT⊛> Next TAB key advances cursor position right one word/phrase.

... **they will estimate estimable estimation**

↑

(HIGHLIGHTED) ----- "estimable" is highlighted, in this case.

However, if the cursor was positioned at the rightmost position, next TAB key moves cursor position to the leftmost. (Leftmost position is estimate, in this case)

(EX. 5)

... **they will eve** ----- Data input

... **they will event eventually eventuate** ----- displayed

↑ <AFTER SUPPLEMENT⊛>

↑ (HIGHLIGHTED) ----- "event" is highlighted, in this case.

Next ENTER key determines "event" at the current cursor position.

... **they will event**

If the above was mistakenly taken, Esc can cancel it and the display contents goes to what was displayed immediately before the operation, as follows.

... **they will** *

↑

Start to input from here, again.

『THE TRANSLATION DOES NOT
HAVE THE PART OF AMENDMENT
FOLLOWING
IN THE CERTIFIED COPY』

1/1

APPENDIXES

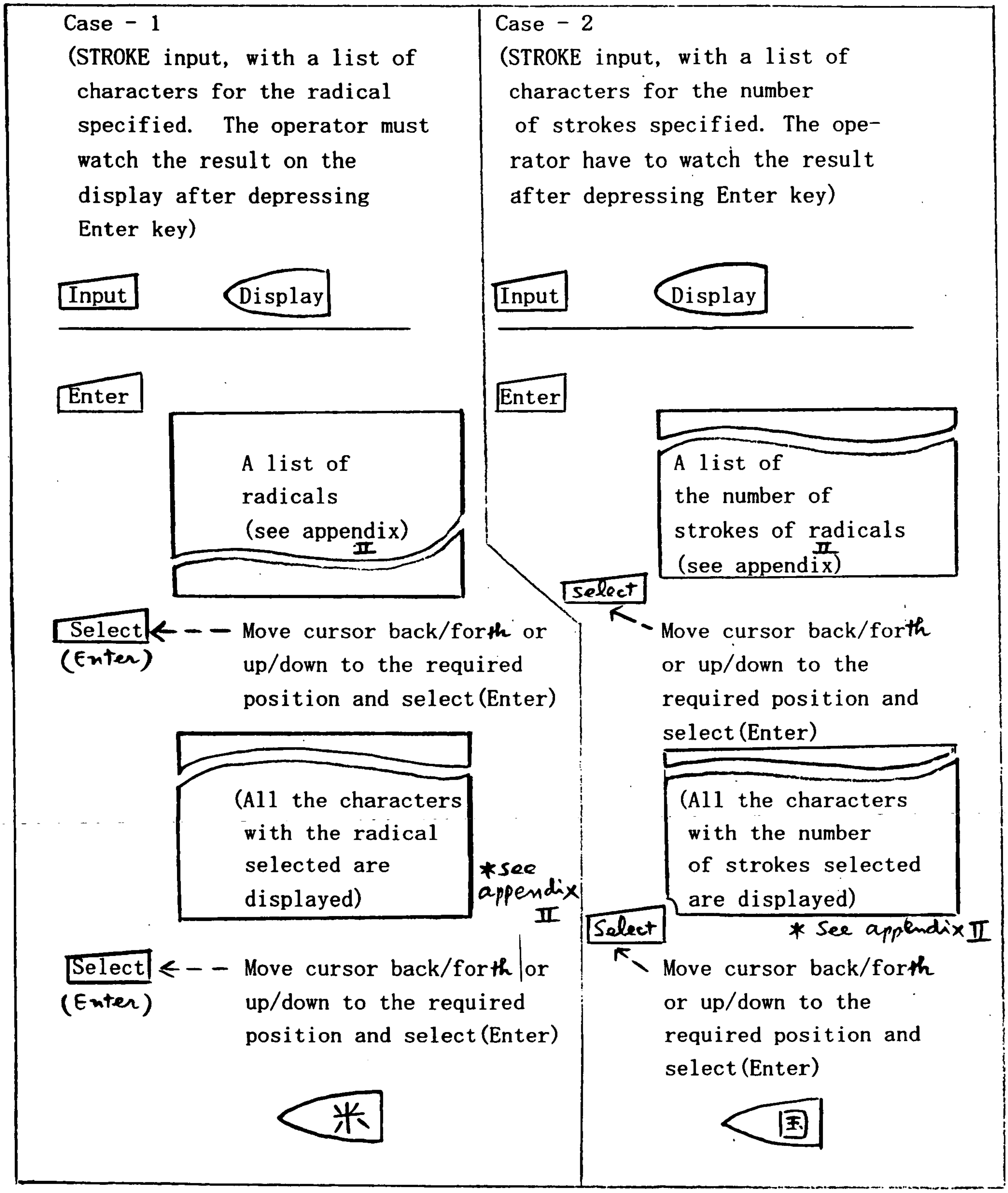
I

COMPARISON
between
conventional method
and
invention method

Conventional method - Examples

(KBI, without Enter key. Operator must always watch the result on the dislay ~~always~~, for the selection of desired word)		(KBI - Abbreviatn., with Enter key. Operator must watch the result of dictionary search, when operator depressed Enter key, for the selection of desired word)	
Input	Display	Input	Display
c	combination | comparison (All the words with ″c″ at the head are displayed)	com + E(enter)	-unknown message- (com is not reg'd) in the abbreviation dictionary in this example)
<< ommitted for the input of : co, com >>			
comm	comma | community (All the words with ″comm″ at the head are displayed)	comm	-ditto-
commo	commodity | commotion (All the words with ″commo″ at the head are displayed)	commp + E	commonplace (″commp is in the abbrevi. dictionary)
commod	commodity (″commodity″ can be selected by the operator)	commun + E	communication (″commun″ is in the abbrevi. dictionary)

Conventional method - Examples



Case - 1

(STROKE input, with a list of characters for the radical specified. The operator must watch the result on the display after depressing Enter key)

A list of radicals (see appendix) II

Move cursor back/forth or up/down to the required position and select(Enter)

(All the characters with the radical selected are displayed)

*see appendix II

Move cursor back/forth or up/down to the required position and select(Enter)

Case - 2

(STROKE input, with a list of characters for the number of strokes specified. The operator have to watch the result after depressing Enter key)

A list of the number of strokes of radicals (see appendix) II

Move cursor back/forth or up/down to the required position and select(Enter)

(All the characters with the number of strokes selected are displayed)

* See appendix II

Move cursor back/forth or up/down to the required position and select(Enter)

Conventional method (Operator oriented performance)		Invention method (Higher performance in a blind manner which is supported by the system)	
Input Sequence	Results on the display	Input Sequence	Results on the display
c	comfort comfortable | comparative compare (All the words with c at the head are displayed)	c	-(None appears)
<< ommitted for the case of input : co, com >>		co	-
		com	-
comm	comma | community (All the words with comm at the head are displayed)	comm	-
commo	commodity | commotion (All words with commo at the head are displayed)	commo	-
commod	commodity ("commodity" can be selected by the operator)	commod	commodity ("commodity" is unique at this position, and the system beeps to notify the operator, and no more input is necessary)

Invention method - Examples

Case - 1
(KBI, without Enter key.
Operator does not have
to watch the result
on the display)

Input	Display
c	–
co	–
com	–
comm	–
commo	–
commod	commodity ("commodity" appears on the display and beeps, as a unique word was found)

Case - 2
(KBI - Abbreviatn., without Enter key.
Operator does not have to watch
the result on the display)

Input	Display
c	–
comd	commodity
comdt	commodity
│	
commp	commonplace
compl	commonplace
commwl	commonwealth
cmnwlth	commonwealth
communi	communication
│	

"Input char. do not have to be registered in the abbreviation dictionary". Even if it has the abbreviation dictionary, the first char. followed by some other char. are required to input.

Invention method

(STROKE input .
Operator does not have to watch the result on the display, as the system beeps, upon detection of a unique one, by the system)

(Example of Kanji characters to make comparison)

Input		Display
一	(一)	-
|	(十)	-
/	(才)	-
\	(木)	-
ノ	(木')	柊

Unique stroke input data, in this case

日

ひらび・いわく

日 曳 更 但 旱 曳 杳 昂 昏 昍 怛
杲 昊 昃 旻 洩 是 宣 冒 昴 易 昜
桓 晃 冥 倡 剔 晏 晉 晁 涅 疸 耆
袒 娼 莫 惜 措 曽 曹 悼 偈 冕 勗
曼 替 晨 晟 晳 猖 萓 暄 榾 晩 帽
寔 愃 暃 椿 湨 幌 萱 暝 蜈 傣 萛
歇 滉 暢 暮 暘 溜 暦 潜 遭 僭 僣
塲 暇 暘 揚 碭 蝪 蜴 稽 擬 暫 賜
潛 噌 槽 暫 憬 濟 緡 翔 腸 蝎 蜴
蝿 醋 錫 醒 暨 瞥 檄 榻 獪 縉 騰
蓍 螟 謓 糟 桧 緩 膾 糟 顕 糧 瀑
釋 觴 諼 觸 譜 壜 潛 繪 譜 譖 鏝
鶍 鵑 饅 鯑 曩 躍

月

つき・つきへん

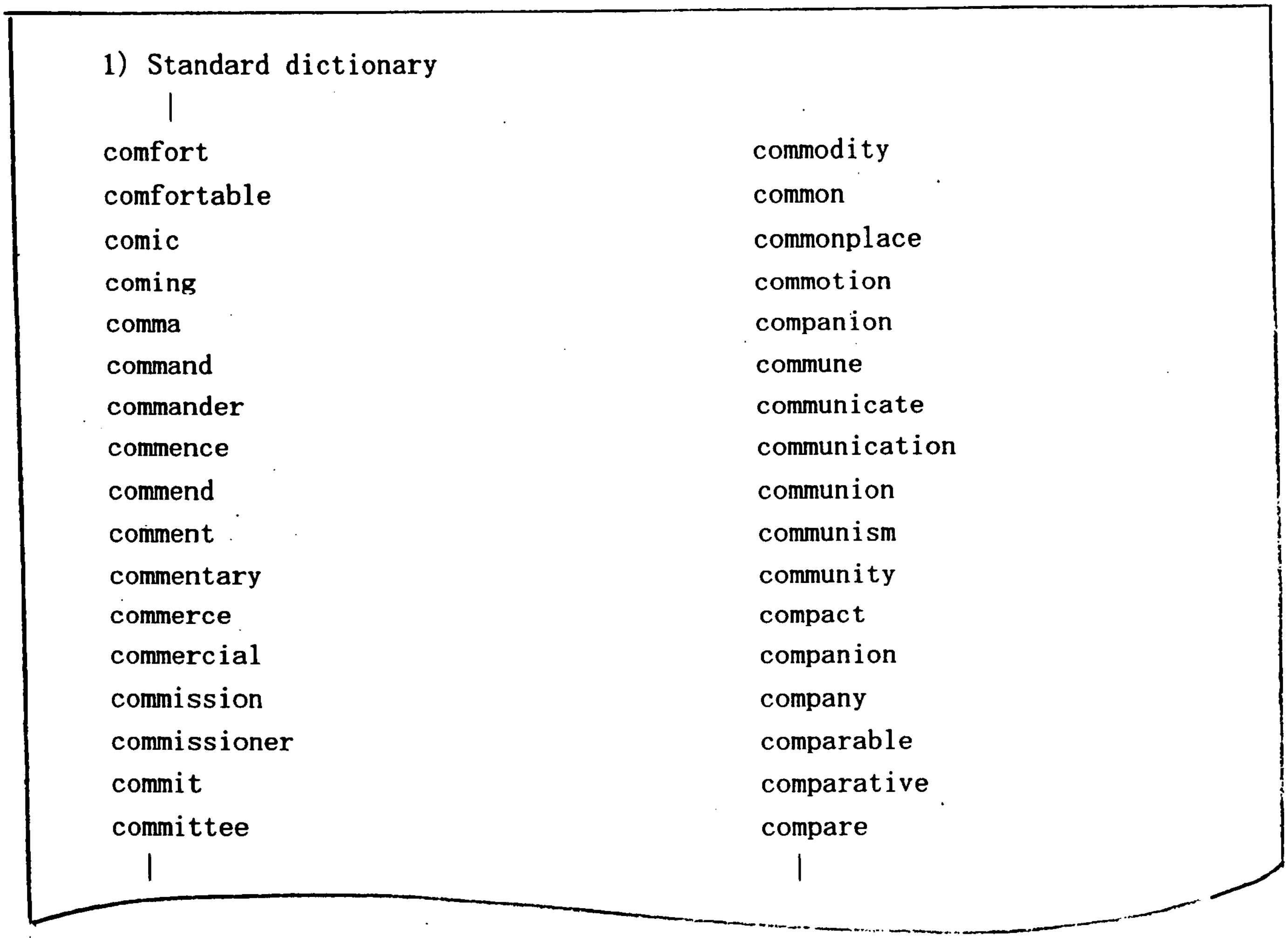
朋 郁 削 兪 朏 朔 哨 宵 朕 娟 悄
捐 涓 狷 梢 崩 剪 堋 硼 朖 崩 硝
揃 惰 棚 婿 塑 莽 萌 煎 盟 椿 蛸
椰 溯 硼 遡 塑 槊 滕 䑓 箭 朧 廟
嘲 潸 蝴 膂 鞘 膝 臍 朦 緗 餬 鵬
翔 鵬 蔴 騰 朧 縢 籐 藤

木

きへん・き

朮 朽 朴 凩 束 朶 杁 杤 杒 杏 杓
杜 李 杆 杞 杠 杙 杣 杤 沐 杵 枢
杷 枇 呆 杳 框 杰 枩 杼 杪 枌 枋
枦 枡 枅 淋 架 柵 柁 柎 柘 柄 柏
柊 柄 某 柾 柚 枷 柯 柺 柬 枳 柩
枸 机 柞 柝 柢 栅 枹 柎 柆 栢 桓
桔 桐 桑 桁 栈 栖 栓 栫 栴 桑 栱

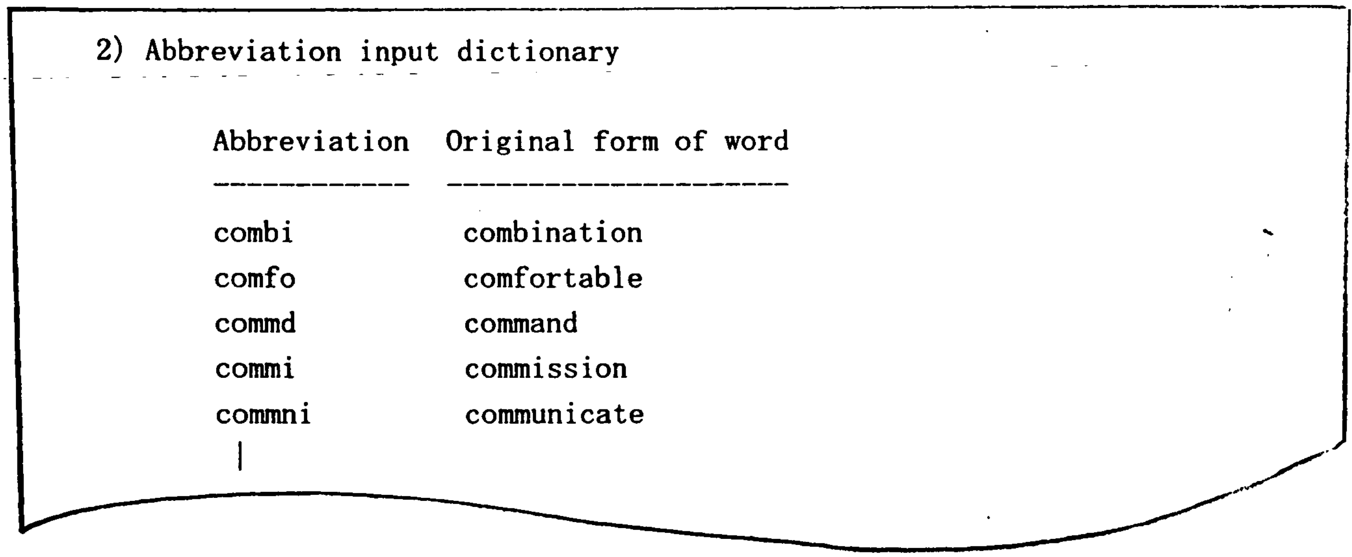
An example of dictionary for the conventional method



1) Standard dictionary

comfort
comfortable
comic
coming
comma
command
commander
commence
commend
comment
commentary
commerce
commercial
commission
commissioner
commit
committee

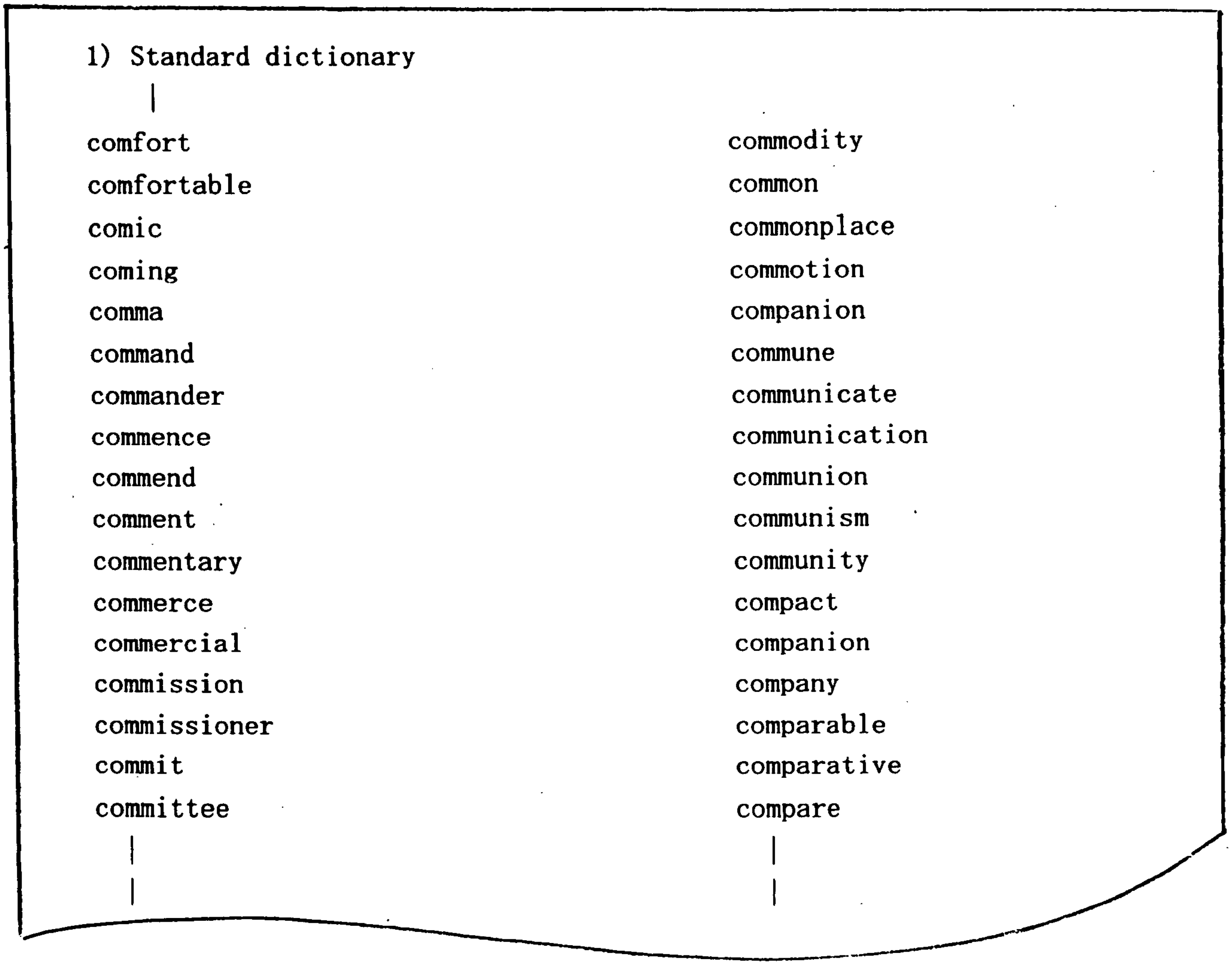
commodity
common
commonplace
commotion
companion
commune
communicate
communication
communion
communism
community
compact
companion
company
comparable
comparative
compare



2) Abbreviation input dictionary

Abbreviation	Original form of word
combi	combination
comfo	comfortable
commd	command
commi	commission
commni	communicate

An example of dictionary for the invention method



1) Standard dictionary

|

comfort
comfortable
comic
coming
comma
command
commander
commence
commend
comment
commentary
commerce
commercial
commission
commissioner
commit
committee

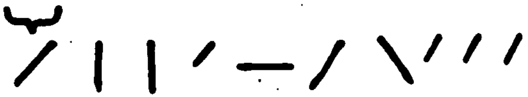
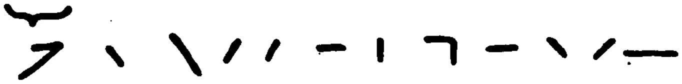
|
|

commodity
common
commonplace
commotion
companion
commune
communicate
communication
communion
communism
community
compact
companion
company
comparable
comparative
compare

|
|

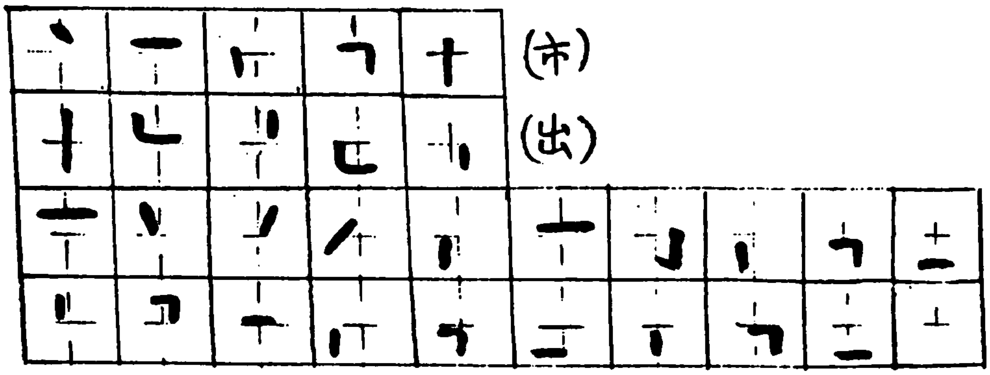
An example of STROKE dictionary

1) Stroke dictionary

#	HANDWRITING CHARACTER PATTERN ELEMENT CODES	ORIGINAL WORD	UNIQUE POSITION COUNT
1	øø ø1 ø1 1ø ø2 øø 3ø 11 11 11	修	1
			
2	4ø 2ø 12 ø2 ø1 2ø 1ø ø2 25 12 ø2 ø1 45 55	録	1
3	ø2 ø1 12 11 ø2	正	2
4	ø2 11 25 12 12 øø 3ø	更	2
5	ø4 ø1 1ø 2ø 12 ø2 ø1 1ø 2ø	除	1
6	11 2ø 1ø ø1 24 12 12 11 ø5	削	1
7	14 2ø 3ø 1ø 1ø 12 11 25 12 2ø 1ø ø2	登	1
			

(Other example)

HANDWRITING STROKE (WORD PATTERN ELEMENTS DATA) — UNIQUE POSITION COUNT



(市)	1	
(出)	1	
	1	(荷)
	1	(品)

APPENDIXES
II

- Dictionary examples for the invention method
- Examples of the number of strokes and radicals
- Examples of Chinese characters and Japanese Kanji characters

11/18

Dictionary — Examples for the invention method

An example of standard dictionary		An example of selected words dictionary (e.g. more than 6 characters only, or, limited number of words ith the same stem of word, etc)	
Word/Phrase	Number of char. / Unique position in the dictionary	Word/Phrase	Number of char. / Unique position in the dictionary
abandon	7 / 4	abandon	7 / 3
abate	5 / 4		
abbey	5 / 4		
abbot	5 / 4		
abdomen	7 / 3	abdomen	7 / 3
abhor	5 / 3		
abide	5 / 4		
ability	7 / 4	ability	7 / 3
abject	6 / 3	abject	6 / 3
able	4 / 3		
abnormal	8 / 3	abnormal	8 / 3
aboard	6 / 4	aboard	6 / 4
abode	5 / 4		
abolish	7 / 6	abolish	7 / 4
abolition	9 / 6		
abominable	10 / 4	abominable	10 / 4
abound	6 / 4	abound	6 / 4
about	5 / 5		
above	5 / 4		
abridge	7 / 4	abridge	7 / 4
abroad	6 / 4	abroad	6 / 4
abrupt	6 / 4	abrupt	6 / 4
absence	7 / 6		
absent	6 / 6	absent	6 / 4
absinthe	8 / 4	absinthe	8 / 4
absolute	8 / 6	absolute	8 / 6
absolve	7 / 6	absolve	7 / 6
absorb	6 / 6	absorb	6 / 5
absorbent	9 / 7		
abstain	7 / 5	abstain	7 / 5
abstract	8 / 8	abstract	8 / 5
abstraction	11 / 9		
absurd	6 / 4	absurd	6 / 4
abundance	9 / 8		
abundant	8 / 8	abundant	8 / 4
abuse	5 / 4	abuse	5 / 4
acacia	6 / 4	acacia	6 / 4
academic	8 / 7	academic	8 / 4
academy	7 / 7		
accent	6 / 5	accent	6 / 5
accept	6 / 6	accept	6 / 5
acceptable	10 / 7		
access	6 / 6		
accessory	9 / 7	accessory	9 / 4
accident	8 / 8	accident	8 / 4
accidental	10 / 9		
acclaim	7 / 4	acclaim	7 / 4
accomodate	10 / 4	accomodate	10 / 4
(Total)	334 / 245 = 0.73		212 / 124 = 0.58
	(27 percent differences)		(42 percent differences)

Examples of the number of strokes and radicals

The number of strokes

Radicals

画	部首	読み	画	部首	読み	画	部首	読み
1	一	いち	3	士	さむらい	4	方	ほう
	ノ	の		夕	ゆう		日	にち
2	亠	なべ ふた		大	だい		月	つき
	人	にん ひと		女	おんな		木	き
	儿	ひとあし る		子	こ		欠	けつ あくび
	刂 •	りっとう		宀	う		歹	いちた
	刀 •	かたな		寸	すん		殳	るまた
	八	はち		小(⺌)	しょう つ		毛	け
	匚,囗,冂	かまえ		尸	しゃく		气	きがまえ
	冖	わ		山	やま		水 •	みず すい
	冫	ん に		己	おのれ		爪	つめ
	几	つくえ		巾	はば		片	かた
	凵	うけばこ		广	ま		牛(牜)	うし
	力	か ちから		廴	えん		犬 •	いぬ
	勹	つつみ く		弋	しき		礻 •	ね
	十	じゅう		弓	ゆみ		王(玉)	おう たま
	卩	ふし せつ		彳	ぎょう		戈	ほこ
	厂	がん		(左)阝(阜)	こざと	5	瓜	うり
	又	また ぬ		(右)阝(邑)	おおざと		示 •	しめす
3	口	くち ろ		辶(辶)	しん		衤 •	ころも
	氵 •	さん し		艹	くさ		田 •	た
	犭 •	けもの	4	心 •	こころ		疒	やまい
	忄 •	りっしん		火 •	ひ		癶	はつ
	扌(手)	て		灬 •	れっか		白	しろ
	土	つち ど		攵	のぶん		皮	かわ

13/18

Examples of the number of strokes and radicals

The number of strokes   Radicals

画	部首	読み
5	皿	さら
	目	め
	矢	や
	石	いし
	禾	のぎ
	穴	あな
	立	たつ りつ
	四	よん
	瓦	かわら
6	糸	いと
	缶	かん
	竹	たけ
	羊	ひつじ
	羽	はね
	老	おい ろう
	耒	すき
	耳	みみ
	聿	ふで
	肉	にく
	米	こめ
	臼	うす
	舌	した
	舟	ふね
	虍	とら
	虫	むし
6	血	ち
	衣	きぬ
	襾(西)	にし
7	臣	おみ
	見	みる けん
	言	ごん
	谷	たに
	豆	まめ
	豕	いのこ
	貝	かい
	赤	あか
	走	はしる そう
	足(⻊)	あし
	身	み
	車	くるま
	辛	からい
	酉	さけ ひよみ
	釆	のごめ
	豸	むじな
	角	つの
8	金	かね
	門	もん
	隹	ふるとり
	雨	あめ
	非	あらず
9	革	かく
	韋	なめし
	音	おと
	頁	おおがい ページ
	風	かぜ
	食	しょく
	首	くび
	香	かおり こう
	面	めん
10	馬	うま
	骨	ほね
	髟	かみ
	鬥	とう
	鬼	おに
	高	たかい
11	鳥	とり
	魚	うお
	鹿	しか
	麥(麦)	ばく むぎ
12	黒	くろ
14	鼻	はな
15	歯	は
16	亀	かめ

(B-2/2)

注１：＊のついたのは，同一部首で表現が２のあるものを示します．
（忄―心，礻―示，衤―衣，刂―刂，犭―犬，氵―水，⺮―….）

注２：“月”を含む文字は，“つき”の部首ではなく“にく”の部首に含まれることがあります．

Radicals

Examples of

Chinese characters

Japanese Kanji characters

	シフトJIS	JIS	区点	0 1 2 3	4 5 6 7	8 9 A B	C D E F
一	989E	5020	4800	弌丐丕			
丨	989E	5020	4800		个丱		
丶	989E	5020	4800		丶丼		
丿	989E	5020	4800			丿乂乖乘	
乙	989E	5020	4800				亂
亅	989E	5020	4800				亅豫亊
	98AE	5030	4816	舒			
二	98AE	5030	4816	弍于亞	亟		
亠	98AE	5030	4816		亠亢亰	亳亶	
人	98AE	5030	4816			从仍	仄仆仂仗
	98BE	5040	4832	仞仭仟价	伉佚估佛	佝佗佇佶	侈侏侘佻
	98CE	5050	4848	佩佰侑佯	來侖儘俔	俟俎俘俛	俑俚俐俤
	98DE	5060	4864	俥倚倨倔	倪倥倅伜	俶倡倩倬	俾俯們倆
	98EE	5070	4880	偃假會偕	偐偈做偖	偬偸傀傚	傅傴傲
	993F	5120	4900	僉僊傳	僂僖僞僥	僭僣僮價	僵儉儁儂
	994F	5130	4916	儖儕儔儚	儡儺儷儼	儻	
儿	994F	5130	4916			儿兀兒	兌兔兢竸
入	995F	5140	4932	兩兪			
八	995F	5140	4932	兮冀			
冂	995F	5140	4932		冂囘册冉	冏冑冓冕	
冖	995F	5140	4932				冖冤冦冢
	996F	5150	4948	冩冪			
冫	996F	5150	4948	冫决	冱冲冰况	冽凅凉凛	
几	996F	5150	4948				几處凩凭
	9980	5160	4964	凰			
凵	9980	5160	4964	凵凾			
刀	9980	5160	4964	刄	刋刔刎刧	刪刮刳刹	剏剄剋剌
	9980	5170	4980	剞剔剪剴	剩剳剿剽	劍劔劒剱	劈劑辨
	999E	5220	5000	辧			
力	999E	5220	5000	劬劭	劼劵勁勍	勗勞勣勦	飭勠勳勵
	99AE	5230	5016	勸			
勹	99AE	5230	5016	勹匆匈	甸匍匐匏		
匕	99AE	5230	5016			匕	
匚	99AE	5230	5016			匚匣匯	匱匳
匸	99AE	5230	5016				匸區
十	99BE	5240	5032	卆卅丗卉	卍凖		
卜	99BE	5240	5032		卞		
卩	99BE	5240	5032		卩	卮夘卻卷	
厂	99BE	5240	5032				厂厖厠厦
	シフトJIS	JIS	区点	0 1 2 3	4 5 6 7	8 9 A B	C D E F

15/18

Examples of

Chinese characters

Japanese Kanji characters

Radicals

	シフトJIS	JIS	区点	0 1 2 3	4 5 6 7	8 9 A B	C D E F
厂	99CE	5250	5048	厥厮厰			
厶	99CE	5250	5048	厶	參簒		
又	99CE	5250	5048		雙叟	曼燮	
口	99CE	5250	5048			叮叨	叭叺吁吽
	99DE	5260	5064	呀听吭吼	吮吶吩吝	呎咏呵咎	呟呱呷呰
	99EE	5270	5080	咒呻咀呶	咄咐咆哇	咢咸咥咬	哄哈咨
	9A3F	5320	5100	咫哂咤	咾咼哘哥	哦唏唔哽	哮哭哺哢
	9A4F	5330	5116	唹啀啣啌	售啜啅啖	啗唸唳啝	喙喀咯喊
	9A5F	5340	5132	喟啻啾喘	喞單啼喃	喩喇喨嗚	嗅嗟嗄嗜
	9A6F	5350	5148	嗤嗔嘔嗷	嘖嗾嗽嘛	嗹噎噐營	嘴嘶嘲嘸
	9A80	5360	5164	噫噤嘯噬	噪嚆嚀嚊	嚠嚔嚏嚥	嚮嚶嚴囂
	9A90	5370	5180	嚼囁囃囀	囈囎囑囓		
囗	9A90	5370	5180			囗囮囹圀	囿圄圉
	9A9E	5420	5200	圈國圍	圓團圖嗇	圜	
土	9A9E	5420	5200			圦圷圸	坎圻址坏
	9AAE	5430	5216	坩埀垈坡	坿垉垓垠	垳垤垪垰	埃埆埔埒
	9ABE	5440	5232	埓堊埖埣	堋堙堝塲	堡塢塋塰	毀塒堽塹
	9ACE	5450	5248	墅墹墟墫	墺壞墻墸	墮壅壓壑	壗壙壘壥
	9ADE	5460	5264	壜壤壟			
士	9ADE	5460	5264	壯	壺壹壻壼	壽	
夂	9ADE	5460	5264			夂	
夊	9ADE	5460	5264			夊夐	
夕	9ADE	5460	5264				夛梦夥
大	9ADE	5460	5264				夬
	9AEE	5470	5280	夭夲夸夾	竒奕奐奎	奚奘奢奠	奧奬奩
女	9B3F	5520	5300	奸妁妝	佞侫妣妲	姆姨姜妍	姙姚娥娟
	9B4F	5530	5316	娑娜娉娚	婀婬婉娵	娶婢婪媚	媼媾嫋嫂
	9B5F	5540	5332	媽嫣嫗嫦	嫩嫖嫺嫻	嬌嬋嬖嬲	嫐嬪嬶嬾
	9B6F	5550	5348	孃孅孀			
子	9B6F	5550	5348	孑	孕孚孛孥	孩孰孳孵	學斈孺
宀	9B6F	5550	5348				宀
	9B80	5560	5364	它宦宸寃	寇寉寔寐	寤實寢寞	寥寫寰寶
	9B90	5570	5380	寳			
寸	9B90	5570	5380	尅將專	對		
小	9B90	5570	5380		尓尠		
尤	9B90	5570	5380		尢	尨	
尸	9B90	5570	5380			尸尹屁	屆屎屓
	9B9E	5620	5400	屐屏孱	屬		
屮	9B9E	5620	5400		屮		
山	9B9E	5620	5400		乢屶	屹岌岑岔	妛岫岻岶
	9BAE	5630	5416	岼岷峅岾	峇峙峩峽	峺峭嶌峪	崋崕崗嵜
	シフトJIS	JIS	区点	0 1 2 3	4 5 6 7	8 9 A B	C D E F

A-2/3

16/18

Radicals

Examples of
Chinese characters
Japanese Kanji characters

A-3/3

	シフトJIS	JIS	区点	0123	4567	89AB	CDEF
山	9BB3	5460	5432	崟崛崑崔	崢崚崙崘	嵌嵒嵎嵋	嵬嵳嵶嶇
	9BCE	5650	5448	嶄嶂嶢嶝	嶬嶮嶽嶐	嶷嶼巉巍	巓巒巖
巛	9BCE	5650	5448				巛
工	9BDE	5660	5464	巫			
己	9BDE	5660	5464	已巵			
巾	9BDE	5660	5464	帋	帚帙帑帛	帶帷幄幃	幀幎幗幔
	9BEE	5670	5480	幟幢幤幇			
干	9BEE	5670	5480		幵并		
幺	9BEE	5670	5480		幺麼		
广	9BEE	5670	5480			广庠廁廂	廈廐廏
	9C3F	5720	5500	廖廣廝	廚廛廢廡	廨廩廬廱	廳廰
廴	9C3F	5720	5500				廴廸
廾	9C4F	5730	5516	廾弃弉彝	彜		
弋	9C4F	5730	5516		弋弑		
弓	9C4F	5730	5516		弖	弩弭弸彁	彈彌彎弯
彑	9C5F	5740	5532	彑彖彗彙			
彡	9C5F	5740	5532		彡彭		
彳	9C5F	5740	5532		彳彷	徃徂彿徊	很徑徇從
	9C6F	5750	5548	徙徘徠徨	徭徼		
心	9C6F	5750	5548		忖忻	忤忸忱忝	悳忿怡恠
	9C80	5760	5564	怙怐怩怎	怱怛怕怫	怦怏怺恚	恁恪恷恟
	9C90	5770	5580	恊恆恍恣	恃恤恂恬	恫恙悁悍	惧悃悚
	9C9E	5820	5600	悄悛悖	悗悒悧悋	惡悸惠惓	悴忰悽惆
	9CAE	5830	5616	悵惘慍愕	愆惶惷愀	惴惺愃愡	惻惱愍愎
	9CBE	5840	5632	慇愾愨愧	慊愿愼愬	愴愽慂慄	慳慷慘慙
	9CCE	5850	5648	慚慫慴慯	慥慱慟慝	慓慵憙憖	憇憬憔憚
	9CDE	5860	5664	憊憑憫憮	懌懊應懷	懈懃懆憺	懋罹懍懦
	9CEE	5870	5680	懣懶懺懴	懿懽懼懾	戀	
戈	9CEE	5870	5680			戈戉戍	戌戔戛
	9D3F	5920	5700	戞戡截	戮戰戲戳		
戸	9D3F	5920	5700			扁	
手	9D3F	5920	5700			扎扞扣	扛扠扨扼
	9D4F	5930	5716	抂抉找抒	抓抖拔抃	抔拗拑抻	拏拿拆擔
	9D5F	5940	5732	拈拜拌拊	拂拇抛拉	挌拮拱挧	挂挈拯拵
	9D6F	5950	5748	捐挾捍搜	捏掖掎掀	掫捶掣掏	掉掟掵捫
	9D80	5960	5764	捩掾揩揀	揆揣揉插	揶揄搖搴	搆搓搦搶
	9D90	5970	5780	攝搗搨搏	摧摯摶摎	攪撕撓撥	撩撈撼
	9DAE	5A20	5800	據擒擅	擇撻擘擂	擱擧舉擠	擡抬擣擯
	9DAE	5A30	5816	攬擶擴擲	擺攀擽攘	攜攅攤攣	攫
支	9DAE	5A30	5816				支攵攷
	9DBE	5A40	5832	收攸畋效	敖敕敍敘	敞敝敲數	斂斃變
	シフトJIS	JIS	区点	0123	4567	89AB	CDEF

17/18

Japanese Kanji characters

Radicals

●画数順に並んでいます

■1画 (The number of stroke : 1)

一

いち

丑 弌 丐 丙 丕 夷 亟

丨

ぼう・たてぼう

个 丱

丶

てん

丶 义 刃 斥 丼 汎 兎 訊 豹 執 梵
詠 訴

丿

の・はらいぼう

丿 乂 壬 屯 乎 乍 兎 乖 粂 怎 乗
乘 剰

乙

おつ・おつにょう

乞 乢 扎 吃 屹 叽 糺 帆 訖 紮 亂

亅

はねぼう

亅 争 舒 豫

■2画 (The number of stroke : 2)

二

に

于 云 弍 弐 亙 亘 些 竺 亞 亟 聚
悪 極 錏

亠

なべぶた・けいさんかんむり

亠 亢 亥 亦 芒 亨 弃 育 効 氓 衷
亮 京 咬 垓 奕 孩 弯 狡 畝 畜 亳
涼 勍 效 旁 迹 郭 牽 淙 孰 掖 毫
皎 袞 裹 喪 蛮 椋 啶 渟 豚 蛟 亶
稟 真 雍 頏 膏 豪 瑪 滾 漓 褒 褻
凛 攸 壇 擁 爽 憬 擅 鯨 駭 駮 檀

毹 褒 襄 嫠 鴆 甕 雜 壞 懷 擲 羸
齋 鶉 鷁 壞 孃 攘 贏 魍 轆 儼 顫
蠲 齎 讒 醸 驤

人

にんべん・ひと・ひとやね・ひとがしら

个 介 仇 什 从 仍 仄 仆 仂 仔 仗
仞 仭 仟 伎 伐 价 伉 伜 伽 坐 但
佃 佑 伶 佚 佶 佛 佝 佗 佇 附 夾
佞 岑 巫 攸 依 佳 侃 佼 侪 附 侮
佶 侈 侏 侘 佻 佩 佰 侑 佯 來 侖
儘 凭 咎 囹 坐 侫 戻 泗 舍 侹 俄
臥 俠 侯 促 俣 倡 俔 俟 俎 俘 俛
俑 俚 俐 俤 俥 昤 姙 谷 洽 畛 矜
苓 陋 倦 倖 捲 閃 倓 倣 倴 倫 倭
倚 倨 倔 倪 倥 倅 假 倡 倩 倬 俾
俯 們 倆 峽 恁 悠 拿 挾 檜 浹 烋
狹 倏 荅 莢 荼 衾 陝 偽 偲 偵 悠
偎 假 偕 偐 偈 做 偖 偬 偸 剱 埣
崙 崘 從 徠 悴 掖 掄 敍 敘 條 淪
猝 盒 羚 聆 脩 蛉 袵 貪 琴 喉 傘
筏 傍 傀 傚 傅 堡 棆 猴 睐 粭 翕
腋 葆 僅 禽 傑 愈 傭 會 傴 傲 僉
惓 僞 僂 嵜 愉 掄 渝 碎 筴 筰 箍
嵰 僦 蜍 僑 僩 僚 僖 僞 僥 僭 僣
僮 滌 粹 綸 蓿 褓 覡 誣 鞆 儀 僻
價 儂 儉 儁 儂 劍 匳 慫 瘉 篋 篌
舗 賚 錸 錵 舘 儒 儘 儕 儔 儚 劒
劔 噞 墻 輪 憊 擒 獪 艙 薈 險 餘
鴒 黔 黛 儖 儡 斂 檢 檎 歛 濮 牆
縱 蹤 膾 臉 蹌 鯑 鴿 鞭 儲 嶮 穡
蹤 鴉 籤 繪 艪 鐍 鵮 齡 儺 儷 儼
儻 龕 驗 鹼 藪 鯩

儿

ひとあし・にんにょう

儿 兀 允 兇 克 兎 禿 兌 况 吮 兒
芫 阮 玩 呪 佻 兒 免 羌 胱 挑 尭
俛 剋 姚 恍 洸 莞 晃 娩 倪 寃 冦
尅 悗 晄 晁 浣 胱 菟 逸 兜 眺 挽
冕 寃 寇 猊 窕 竟 尭 晩 菟 嘵 筅
絖 蒞 頑 跳 涗 睨 蛻 誂 銑 銚 貌
兢 輝 堯 猊 輓 覓 翹 蟯 饒 讒

入

C-1/2

Radicals

いる・いりやね・いりにゅう・いりがしら
叺 圦 杁 吶 㒳 肭 兪 衲 倆 蚋 釟
陝 訥 喩 揄 渝 楡 瑜 褕 逾 鞆 鳰
滿 瘉 蝓 輛 瞞 覦 踰 鍮 懣 蹣 魎
緉

八

はちがしら・はち
兮 只 叭 兌 共 券 巻 拌 冏 哄 拱
枳 瓮 盼 胖 翁 舩 蚣 袢 瓮 惓 栱
袢 絆 倂 煢 榜 椣 腆 柄 蛻 拳 溠
隙 箕 滕 綣 典 蜷 喃 袞 鯕 縦 脊
謐 閧 慨 敷 謚 鎰 齣

冂

けいがまえ・どうがまえ・えんがまえ・まきがまえ
冂 冋 冊 冉 冏 刪 侖 苒 柵 珊 胄
咼 侗 扁 烱 罔 迥 栴 蒨 旃 崗 崙
輪 倜 惆 淪 惘 網 堝 稠 棆 楣 萵
踴 嫡 搆 稠 裔 稱 窩 綢 綸 蜩 滴
嫡 蝸 幣 蔽 雕 彫 覯 謫 鵰 鯛 譎
輛 辭 騙 驕 齣

冖

わかんむり
冖 罕 冥 冤 冠 冢 壺 壹 塋 幎 榮
溟 縈 寫 瞑 榠 鞣 羃 鼏 暝 螟 螢

冫

にすい
冫 决 冱 冲 冰 冴 冶 况 於 儲 冽
凅 姿 炭 柊 斉 准 凄 凋 凍 凌 凉
恣 疼 唹 淤 瓷 凖 粢 馮 韵 凜 諮
憑 終 螽 擊

几

きにょう・つくえ・ぼんのかまえ・かぜがまえ
几 亢 凧 夙 凪 汎 伉 凩 坑 抗 吭
拋 佩 凭 兕 凫 珮 處 凰 梵 凱 頏
鳧 鳳

凵

かんがまえ・うけばこ・かんにょう
凵 屯 兇 匈 拙 凾 咄 屈 朏 柮 惱
函 祟 涵 櫻 黜 豈 鑁 艷

刀

かたな・りっとう・やいば
刃 刄 仞 仭 刋 叨 労 判 刎 扨 初
扮 刪 份 吩 岔 汾 分 刺 免 洌 刮
刳 刹 忿 粉 氛 邵 契 荊 削 窃 則
剃 俐 挈 到 剋 剌 冽 跏 砌 粉 茘
迢 捌 剥 剖 寃 刧 剞 別 悗 悧 絜
莉 觔 釗 剰 剪 剱 剛 測 犂 鍛 詔
籾 揃 芬 訓 剩 剳 喇 脯 惻 掣 捌
溂 貂 殺 煎 箚 剿 剽 楔 蜊 箕 劃
劄 溜 箭 劉 剣 勞 剴 劈 劒 劔 劊
辨 辦 薊 嚠 擶 瀏 鯏 齠 澁 嚙 釁

力

ちから・りきづくり
仂 肋 朸 伽 劫 劬 劭 茄 拐 効 劼
劵 拗 抛 架 迦 勅 勃 勁 協 枷 枴
珈 務 勍 甥 痂 筋 鉫 勘 袈 勗 笳
勒 捞 湧 勞 榜 渤 跏 飭 虜 勛 勦
飭 勠 嫐 勘 男 嵩 慟 鴐 勲 鋤 撈
勳 勵 踊 嬲 懃 擄 懋

勹

つつみがまえ
勹 勾 勿 匁 匆 刎 佝 妁 芍 杓 灼
侚 劬 甸 狗 拘 忽 庖 泡 咆 垉 怐
苟 苞 胞 佃 徇 怱 恂 怐 易 衲 枸
枹 洵 洶 炮 荀 殉 豹 疱 皰 笏 芻
袍 掏 掲 惚 偈 筍 匏 掬 蚫 絢 鉤
葛 葡 愡 椈 黎 筍 葯 鈎 褐 暍 歇
煦 芻 菊 蜀 暢 詢 遏 鄒 鉤 鉋 雹
韵 鞄 碣 竭 綯 筍 蜴 齙 皺 羯 蝎
蝪 髱 黎 濁 鮑 麭 鞠 燭 趨 雛 鶍
鞫 鞨 麹 [illegible] 鴝 齁 鶵 [illegible]

匕

さじ・さじのひ
匕 叱 它 牝 壱 佗 阳 皀 陀 沱 屍
柁 呢 坭 眞 渇 匙 舵 枹 訛 喝 詑
砒 詣 塡 嗔 愼 椛 跜 鉈 胝 背 謁
猊 瞋 駝 稹 縝 鼉 鮀 鮨 能 態 鎮
顚 鴇

匚

はこがまえ・いしゃがまえ